VII

INDUSTRIAL ACCIDENTS AND THEIR COMPENSATION

INDUSTRIAL ACCIDENTS AND THEIR COMPENSATION

BY

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PREFACE

THIS series of books owes its existence to the generosity of Messrs. Hart, Schaffner, and Marx of Chicago, who have shown a special interest in trying to draw the attention of American youth to the study of economic and commercial subjects, and to encourage the best thinking of the country to investigate the problems which vitally affect the business world of to-day. For this purpose they have delegated to the undersigned Committee the task of selecting topics, making all announcements, and awarding prizes annually for those who wish to compete.

In the year ending June 1, 1909, the following topics were assigned: —

1. German and American methods of regulating trusts.
2. The logic of "Progress and Poverty."
3. What are the ultimate ends of trade-unions, and can these be gained by any application of the principles of monopoly?
4. In view of the existing railway progress, should the United States encourage the construction of waterways?
5. Is it to be expected that the present and

recent production of gold will cause a higher level of prices?

6. Any other topic which has received the approval of the committee.

A first prize of three hundred dollars, and a second prize of two hundred dollars were offered for the best studies presented by class B, composed exclusively of those who, at the time the papers were sent in, were undergraduates of any American college.

The present volume was awarded the first prize.

PROFESSOR J. LAURENCE LAUGHLIN,
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Harvard University.

NOTE

When this essay was first written it represented undergraduate work, and there was no thought of its ultimate publication. During the year that has followed, additional sources have been consulted, — mainly of current material, but the material available on the subject is so voluminous that the outline of any chapter warrants an extended treatise, while the entire paper is little more than a hasty review. It is the hope of the writer, however, that its very brevity will commend this little book to many persons who, lacking the time for consulting a large number of public reports and other sources, desire a general knowledge of the problem presented.

CONTENTS

STATISTICAL TABLES

INDUSTRIAL ACCIDENTS AND THEIR COMPENSATION

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CHAPTER I

STATISTICS OF INDUSTRIAL ACCIDENTS

"The number of accidents which result in the death or crippling of wage workers . . . is simply appalling; in a very few years it runs up to a total far in excess of the aggregate of the dead and wounded in any modern war." — Theodore Roosevelt in his presidential message of December, 1908.

FIGURES sufficiently complete to show the number of accidents to workingmen in American industry are not obtainable. No compilation is made by the federal bureau of labor, and the labor bureaus of but few of the states attempt to gather full information. Even in these states, the provisions of the law are inadequate to enforce the reporting of accidents by employers, and facilities for the gathering of data by factory inspectors are usually lacking. Yet there are many sources from which more or less fragmentary information may be drawn, and it is evident that the statement quoted above from the president's message is conservative.

An intensive study of a particular district with reference to industrial accidents has been

made in connection with the Pittsburg "Survey."[1] It was found that 526 lives were sacrificed to production in Allegheny County, Pennsylvania, in the year ending June 30, 1907. The loss of life was continual and relentless. In no month were fewer than thirty-five killed. In no single week were there fewer than four, and on but sixty-four days of the year, aside from Sundays, was the industry of the county carried on without loss of human life. In the same year about two thousand men suffered injuries serious enough to necessitate extended hospital treatment. Of these, 294 cases were investigated in detail. In 127 cases the victim recovered fully; in 91 cases the injury was slight but permanent; and in 75 it was both permanent and serious. Says the report:—

> There is no respite. Each year turns them out as surely as the mills run full and the railroads prosper. . . . In five years there would be 2585 (above figures prorated). Ten years would make it 5170,—enough to make a little city of cripples. . . . It is no wonder that for a stranger Pittsburg's streets are sad.

Evidence of the large number of deaths resulting from industrial accidents may be drawn from the records of the coroner's office of Cook County, about ninety per cent of

[1] "One Year's Work Accidents and their Cost," by Crystal Eastman, *Charities and the Commons*, vol. xxi, pp. 1143–1174.

whose population reside in the city of Chicago. Table I shows the number of employees killed by the railroads in the county during the five-year period ending November 30, 1909. This includes "grade-crossing" accidents. It is noteworthy that forty-two per cent of all persons killed are victims of the conditions of employment. More conclusive

TABLE I

FATAL RAILWAY ACCIDENTS IN COOK COUNTY (CHICAGO)

	1905	1906	1907	1908	1909	Five years ending with 1909
Total killed	355	371	393	270	329	1718
Employees killed	105	180	190	106	141	722
Percentage of fatal accidents befalling employees	29.5	48.5	48.3	39.2	42.8	42

facts have been found by a study of the individual cases coming into the coroner's office between December 14, 1908, and February 17, 1909.[1] Out of 729 coroner's cases during this time, 212 were inquests upon the causes of accidental deaths, and in an examination of the records of these 212 cases it was found that at least 71 were due to accidents occurring in the course of industrial employment.

[1] From Inquest Register No. 86. This does not include fifty-six deaths in the George W. Jackson Crib disaster of January 20, 1909. The inquest was not completed until late in February, and consequently the cases were not recorded in the volume studied.

Full figures, prorated upon this basis, indicate that 398 persons each year are martyrs to production in the city of Chicago.

The report for 1905 of the decennial census of Massachusetts furnishes data for Table II, showing the number of persons maimed and the causes of injury. It should be observed

TABLE II

PERSONS MAIMED IN MASSACHUSETTS AND CAUSES OF INJURY [1]

Causes of injury	Number maimed	Percentage of all maimed
Occupational accident	1648	40.95
Non-occupational accident	1412	35.09
Disease	528	13.12
Military service	280	6.96
Not specified	156	3.88
Total maimed	4024	100.00

that this table is in no sense complete for industrial accidents in Massachusetts. Of injuries that are fatal, or that are permanent but do not result in the loss of an organ, or that are only temporary, no account is taken. But these limitations on the completeness of the figures only add to the significance of the fact that over forty per cent of the persons maimed met injury in the course of employment. To be sure, no distinction is made between industrial and non-industrial employ-

[1] *Massachusetts Bulletin of Labor*, vol. xii, p. 214.

ments; but it will hardly be doubted that a very large proportion of the occupational accidents befell workingmen.

Further conclusions may be based on a study of the mortality tables of the United States Census. Of all deaths of adult males from 1900 to 1906 inclusive, 126,567, or 9.1 per cent, were due to accidents. "How many of these accidents were the result of occupation it is not possible to determine with absolute accuracy, but it is safe to assume that about one half of the deaths from accident among males is the result of industrial employments."[1]

The collection of industrial accident statistics has been ordered within recent years by the legislatures of many of the leading manufacturing states. Much evidence may be gathered from these sources, but the short time that such laws have been in operation, together with the usual lack of provisions for forcing employers to make returns, renders it doubtful if the figures reported represent the full number of casualties.

In Minnesota, employers report accidents to the State Bureau of Labor. The statistics so gathered are admitted by the bureau to be quite inadequate, but even on the showing of

[1] *Bulletin of the United States Bureau of Labor*, No. 78 p. 422.

reports submitted, it appears that during the year ending July 31, 1907, 3452 workmen were injured. Of these, 220 died from their injuries. During the succeeding year, ending July 31, 1908, 2661 workers were injured, 147 of them fatally.

Data that are admitted to be incomplete are gathered by the Iowa Bureau of Statistics. They show that during the three-year period ending with 1907, 5408 persons were reported to the bureau as injured in the factories and on railways in the state. Of these injuries, 192, or 3.5 per cent, were fatal. These figures, however, being limited to accidents in factories and on railways, doubtless leave out of account a large part of the productive enterprises of the state.

In Wisconsin, physicians are required by law to report to the Bureau of Vital Statistics all accident cases coming under their care.[1] In the year ending September 30, 1907, 13,572 accidents were reported, and of these 7186, or 53 per cent, befell employees while at work. During the succeeding year 10,392 cases were reported, in 5003 of which, or 48 per cent, the victim was an employee at work. Of the 7186 work accidents in 1906–07, 204, or 2.8 per

[1] The assertion is made by the Wisconsin Bureau of Labor and Industrial Statistics, and is supported by very good evidence, that the reporting of accidents is not at all general among the physicians of the state.

cent, were fatal, and 1037, or 14.4 per cent, were permanent. In 1907–08, 135, or 2.7 per cent, of the 5003 industrial accidents were fatal, and in 574, or 11.5 per cent, of the cases, the injury was permanent.

In 1907 a law was enacted in Illinois requiring "every person, firm, or corporation" to report to the State Bureau of Labor Statistics all accidents entailing the loss of thirty or more days' time or resulting in death, that should befall employees engaged in the performance of their duties. Penalties are provided for failure on the part of employers to conform to the requirements of the law. A summary is made in Table III of the returns for the first two and one-half years.

TABLE III

INDUSTRIAL ACCIDENTS IN ILLINOIS [1]

	1907 (July 1 to Dec. 31)	1908	1909	Two and one half years
Number killed	298	524	899	1721
Number injured	1094	2494	2214	5802
Total accidents	1392	3018	3113	7523

The annual reports of the Michigan Bureau of Labor furnish data for the statistics of accidents to workingmen in that state, presented in Table IV.

[1] From the annual reports on *Industrial Accidents in Illinois* of the Illinois Bureau of Labor Statistics.

TABLE IV

INDUSTRIAL ACCIDENTS IN MICHIGAN

	1904	1905	1906	1907	1908	Five years
Fatal	42	52	49	60	46	249
Serious or severe	302	236	387	421	432	1778
Slight	130	112	175	346	282	1045
Total accidents	474	400	611	827	760	3072

In 1904 a law was passed in Ohio making it the duty of all "manufacturers" to report to the State Bureau of Labor accidents befalling their employees. Table V shows the results for three years.

TABLE V

INDUSTRIAL ACCIDENTS IN OHIO

	1906	1907	1908	Three years
Fatal	103	252	105	460
Serious	332	485	397	1214
Minor	1433	1290	752	3475
Total accidents	1868	2027	1254	5149

In 1907 the Bureau of Industrial Statistics of the Pennsylvania Department of Internal Affairs began gathering data relating to industrial accidents. The report for 1907 gives 6140 accidents to men engaged in industrial employments in the state. Of these, 1422 were fatal.

An effort to gather such data has also been made for a number of years by the Bureau of Statistics of New Jersey, but no results for years earlier than 1905 are presented in definite form. For the three years from October 1, 1905, to September 30, 1908, 4266 accidents were reported, of which 928 were fatal.

Figures for accidents in factories, quarries, and tunnel construction have long been gathered by the New York State Department of Labor. Its quarterly bulletins furnish the data for Table VI.

TABLE VI

INDUSTRIAL ACCIDENTS IN NEW YORK

Year (ending June 30)	1907	1908	1909	Three years
Fatal	309	294	258	861
Permanent	2,634	2,124	1,543	6,301
Serious and probably permanent	1,478	1,876	1,880	5,234
Temporary	13,651	11,983	11,756	37,390
Total accidents	18,072	16,277	15,437	49,786

The probable incompleteness of the returns to the state labor offices, as well as the varying regulations for the reporting of accidents, make it impossible to draw definite conclusions from these statements. However, they show clearly that in the year 1907, for example, a total of at least 43,713 industrial acci-

dents befell workingmen in Minnesota, Iowa, Wisconsin, Illinois, Michigan, Ohio, Pennsylvania, New Jersey, and New York, and that 3436 of these were fatal.

For two of the greatest and most hazardous of American industries, coal-mining and railway transportation, accident figures have been gathered that are approximately complete, and fragmentary evidence is available regarding accident risks in iron and steel manufacture.

An astounding total of casualties is chargeable to the production of coal. The United States Geological Survey has collected figures of coal-mining accidents in 1907 and 1908 from twenty-two states, which produce 98 per cent of American coal. In 1907 this report shows 3125 men killed and 5316 injured; in 1908, 2450 killed and 6772 injured. In 1907 one man was killed for each 206 employed; in 1908, one for each 278 employed. In 1907, one man was killed for each 145,471 tons of coal mined; in 1908, one man was killed for each 167,545 tons mined. The Geological Survey has also found that 19,469 men were killed in the coal-mines of the same states during the decade ending with 1908.

For the purpose of a close study of accident statistics in coal-mines, the figures shown in

Table VII have been taken from the mining reports of Pennsylvania and Illinois, — two states which produce sixty per cent of the total output of American coal. The compilation covers the decade ending with 1908, and shows that the average mine employee of these states has one chance in 324 of death from his year's work, and one chance in 138 of injury. If he looks forward to ten years' employment in the mines, he has one chance in 32 of fatal injury, and one chance in 14 that a non-fatal accident will befall him. The production of 178,266 tons of coal entails the loss of a life, while the production of 78,195 tons calls forth an injury. It is a striking fact that over thirty per cent of coal-mine casualties are fatal, — a circumstance doubtless due in large measure to the great disasters which command public attention so frequently.

The manufacture of iron and steel is fraught with many perils. The Cambria Mutual Benefit Company of Johnstown, Pennsylvania, a concern writing industrial insurance almost exclusively among metal workers, has found that 46 per cent of the deaths among its members in 1906 were due to accidents.[1] The Prudential Insurance Company of America reports that for the decade ending with 1906, 11.2 per cent of the deaths among

[1] *Bulletin of the United States Bureau of Labor*, No. 78, p. 425.

TABLE VII

ACCIDENTS TO COAL-MINE EMPLOYEES IN ILLINOIS AND PENNSYLVANIA [1]

	1899	1900	1901	1902 [2]	1903	1904	1905	1906	1907	1908	Ten years
Men employed	269,014	292,128	309,396	329,755	353,386	371,851	392,425	401,386	418,609	427,184	356,513 (average)
Tons of coal mined	150,535,-614	155,689,-609	167,455,-506	165,461,-971	205,841,-333	202,387,-322	226,765,-442	232,260,-847	274,193,-750	238,802,-008	2,019,-393, 402
Men killed	803	770	913	855	1,076	1,288	1,322	1,189	1,679	1,433	11,328
Men employed for each one killed	335	379	339	386	328	289	297	338	249	298	32
Tons coal mined for each man killed	187,466	202,195	183,412	193,522	191,302	157,129	171,532	195,342	163,307	166,644	178,266
Men injured	2,114	2,251	2,321	1,908	2,781	2,471	2,900	2,852	3,212	3,015	25,825
Men employed for each one injured	127	130	133	173	127	150	135	141	130	142	14
Tons coal mined for each man injured	71,209	69,165	72,148	86,721	74,017	81,905	78,195	81,438	85,361	79,205	78,195
Percentage of casualties fatal	27.5	25.4	28.2	30.9	27.9	34.2	31.3	29.4	34.3	32.2	30.4

[1] Compiled from the Annual Reports of the Pennsylvania Department of Mines and the Annual Coal Reports of the Illinois Bureau of Labor Statistics.

[2] The year of the strike in the anthracite coal-fields of Pennsylvania; the mines were operated about one-third time in that year.

its policy-holders employed in the iron and steel industry were due to accidents alone.[1] The reports on fatal accidents in the South Chicago plant of the United States Steel Corporation have been studied in the coroner's office in Chicago. It was found that 46 lives were lost in the plant in 1906. No single great disaster swelled the total. Four men were killed at one time; four more lost their lives in two other accidents. The remaining thirty-eight were picked off one by one. There were, consequently, forty-one separate accidents in which human life was lost.[2]

In 1901 a law was passed by Congress directing the Interstate Commerce Commission to collect full statistics of accidents on American railways, and, while the law has been in effect a comparatively short time, the efficiency of the methods used by the Federal government in gathering information and the relative ease with which facts concerning railways may be obtained, give rise to the belief that these figures are reasonably complete. Table VIII, compiled from the monthly accident bulletins of the commission, shows the number of employees killed or injured, together with the ratios of these to the total

[1] *Bulletin of the United States Bureau of Labor*, No. 78, p. 426.

[2] William Hard in *Everybody's Magazine*, vol. xvii, p. 579. "Steel," says Mr. Hard, "is war."

TABLE VIII

ACCIDENTS TO RAILWAY EMPLOYEES IN THE UNITED STATES [1]

Year (ending June 30th)	1902	1903	1904	1905	1906	1907	1908	Seven years
Men employed	1,189,315	1,312,537	1,296,121	1,382,196	1,521,355	1,672,074	1,458,244	1,404,549 (average)
Men killed	2,516	3,233	3,367	3,261	3,807	4,353	3,358	23,895
Men employed for each one killed	472	406	385	424	399	384	434	59
Men injured [2]	33,711	39,004	43,266	45,426	55,524	62,689	56,344	335,964
Men employed for each one injured	35	33	30	30	27	27	26	4
Percentage of casualties fatal	6.9	7.6	7.4	6.6	6.4	6.5	5.6	6.7
Trainmen employed	225,422	253,660	253,834	265,175	285,556	317,808	281,645	269,014 (average)
Trainmen killed	1,674	2,138	2,156	2,034	2,335	2,596	1,955	14,888
Trainmen employed for each one killed	135	119	118	131	122	123	144	18
Trainmen injured [2]	21,503	25,805	29,171	29,738	35,563	40,430	35,872	218,082
Trainmen employed for each one injured	10	10	9	9	8	8	8	1.2
Percentage of train casualties fatal	7.2	7.6	6.9	6.4	6.1	6.0	5.1	6.4

[1] Compiled from *Accident Bulletins* and *Statistics of Railways in the United States*, published by the Interstate Commerce Commission.

[2] These figures represent injuries resulting in disability of at least four days' duration.

number employed. Similar data are also given for trainmen separately. The totals are large, and the ratios are appalling. During the seven years ending with 1908, 23,895 employees were killed and 335,964 were injured on the railways of the country. A study of the ratios indicates that the average employee may count on one chance in 414 of violent death within a year. If he prefers to consider the prospect of injury, there is one chance in twenty-nine that an accident entailing at least four days' disability will befall him. If he looks forward to seven years of railway employment, he faces one chance in fifty-nine of death by accident, and one in four of injury. The outlook for a trainman is still worse. Of his fellow workers, 14,888 were killed and 218,082 were injured during the seven-year period. In a given year he has one chance in 127 of death, and one in nine of injury. Seven years in the train service offer him one chance in eighteen of death, and, if his place is one of average danger, present a practical certainty of injury.

Without attempting a full examination of the statistics of industrial accidents in foreign countries, a few comparisons may be drawn which disclose the extraordinary hazards of industrial employment in the United States.

Table IX furnishes data for a comparison of statistics of coal-mine accidents in the year 1903. In Europe an employee's chance of fatal injury is in no instance greater than one in 520, and the average for the five countries considered is one in 724. In Illinois and Pennsylvania the chance is one in 323. American methods of coal production and the richness of

TABLE IX

COAL-MINE ACCIDENTS IN EUROPE (1903)[1]

	Austria	Belgium (1902)	Great Britain	France	Prussia	Totals
Men employed	64,051	134,889	842,066	167,213	429,837	1,638,056
Men killed	49	144	1,072	170	826	2,261
Men employed for each one killed	1,307	937	786	984	520	724
Tons of coal mined	11,498,111	22,877,470	230,334,469	34,906,418	108,809,334	408,425,852
Tons mined for each man killed	234,655	158,871	214,864	205,332	131,731	180,639

our mines are such that while the risk of individual injury is twice as great in this country as it is abroad, the number of tons mined for each man killed is practically the same in both instances.

In Table X are shown statistics of railway accidents in Great Britain for 1904 and 1905. In the United Kingdom one man is killed yearly on the railways for each 1427 employed; in the United States it is one for each 414. In Great Britain one man is injured for

[1] Compiled from the special report (1905) of the United States Commissioner of Labor on *Coal Mine Labor in Europe.*

each 150 employed; in the United States, one for each 29. In England, on the other hand, 9.5 per cent of all accidents to railway employees are fatal, as compared with 6.7 per cent in America.

TABLE X

RAILWAY ACCIDENTS TO EMPLOYEES IN GREAT BRITAIN[1]

Year	Men employed	Men killed	Men employed for each one killed	Men injured	Men employed for each one injured	Percentage of casualties fatal
1904	581,664	416	1,398	3,921	148	9.5
1905	581,664[2]	399	1,458	3,800	153	9.5

The statistical information brought forward in this chapter has made it clear that an enormous human tax is imposed by American production. The findings of the Pittsburg "Survey," the study of coroners' records, the reports of the United States Census, the figures gathered by state labor offices, and the complete data concerning coal-mining and railway accidents, together with the comparative statistics from the experience of foreign countries, all point to the importance of the industrial accident problem in the United States.

[1] Compiled from the reports of the Railway Commissioners of the Board of Trade in the *British Parliamentary Papers*.

[2] Figures for 1904 are used. Those for 1905 are not available.

CHAPTER II

THE SOCIAL COST OF INDUSTRIAL ACCIDENTS

It is difficult to measure with any accuracy the extent to which social standards are lowered by the loss of earning power caused by industrial accidents, but the great cost to the community must be evident even to the superficial observer. Any number of very significant illustrations may be drawn from the observations of social workers, and there is every evidence that much evil of the most acute character is traceable to the disorganization of homes when industrial accidents befall the bread-winners. Bright hopes may be blasted, and happy families dragged to the lowest depths of shame and misery, while bench and bar quibble for years over puerile questions of legal responsibility.[1]

An impression may exist that the men killed and injured in industry are usually the aged, who, because of infirmities, are an easy prey to the many pitfalls of danger about railroads, mines, and manufacturing plants.

[1] The general features of this particular home-wrecking evil are skillfully made use of in *The Turn of the Balance*, a work of fiction by Brand Whitlock.

But facts disprove this notion; for one respect in which industrial accidents are very expensive to society is in the youthfulness of the victims.

In the study of industrial accidents in connection with the Pittsburg "Survey,"[1] it was found that of 526 men killed in the industries of Allegheny County in the year ending June 30, 1907, 442, or 84 per cent, were under forty years of age, and that 205, or 39 per cent of all killed, were under thirty.

Of the deaths due to industry in Illinois, reported to the Illinois Bureau of Labor Statistics for the six months ending December 31, 1907, the average age of the victims was thirty-three years. During this period 298 fatal accidents were reported. In 135 cases, or 45 per cent, the victim was under thirty; in 77 cases, or 26 per cent, between thirty and forty; in 53 cases, or 18 per cent, between forty and fifty; and in only 33 cases, or 11 per cent, fifty or over. During the same six-month period, 1094 men were injured severely enough to entail at least thirty days' disability. Of these, 501, or 46 per cent, were under thirty; 281, or 26 per cent, were between thirty and forty; 214, or 19 per cent, were between forty and fifty; and but 98, or 9 per cent, were fifty or over.

[1] See page 1.

For the three years ending July 31, 1908, 246 fatal injuries in Minnesota were reported to the State Bureau of Labor.[1] In 140 cases, or 57 per cent, the man killed was under thirty years of age; in 55 cases, or 23 per cent, between thirty and forty; in 32 cases, or 13 per cent, between forty and fifty; and in only 19 cases, or 8 per cent, fifty or over. Injuries to 2365 persons were reported during the same period, of which 1392, or 59 per cent, were under thirty; 462, or 20 per cent, were between thirty and forty; 359, or 15 per cent, between forty and fifty; and but 152, or 6 per cent, were fifty or older.

Of 7186 industrial accident victims reported to the Wisconsin Bureau of Vital Statistics for the year ending September 30, 1907, 2811, or 39 per cent, were under twenty-five years of age; 3097, or 43 per cent, were between twenty-five and forty-five; and but 1085, or 15 per cent, were over forty-five. In 193 cases the age of the victim was not stated. In the succeeding year, 5003 industrial accidents were reported: 1799 of these, or 36 per cent, befell men under twenty-five; 2271, or 45 per cent, men between twenty-five and forty-five; and only 781, or 15 per cent, men

[1] See page 5. This does not include those injured on railways. Railway companies report to the State Railroad and Warehouse Commission.

as old as forty-five. In 152 cases the age was not stated. Of the 135 men suffering fatal injury in 1907–08, 42, or 31 per cent, were under twenty-five; 51, or 38 per cent, were between twenty-five and forty-five; and 42, or 31 per cent, were forty-five or older.

From experience in Minnesota, Illinois, Wisconsin, and in Pittsburg, it therefore seems clearly established that the victims of industrial accidents are not old men whose infirmities have rendered them particularly liable to injury. About 45 per cent of the casualties considered befell men under thirty years of age; about 80 per cent, men under forty; and about 90 per cent, men who had not reached fifty, — the lowest age at which society, from a purely economic interest, can afford to lose the services of its workingmen.

Industry, in a word, is doubly wasteful of life and efficiency. It may be charged not only with the extravagance of killing and maiming yearly thousands of workers, but it seems to choose for its victims many persons in the prime of manhood, normally with years of life before them, and with obligations but partially discharged to wives and children.

And what of these wives and children? Are the victims of industrial accidents those who

have been led by the lack of social ties to commit the reckless blunder of being killed or maimed? Table XI shows that the 11,328 coal-miners killed at work in Illinois and Pennsylvania during the ten years ending with 1908, left 6183 widows and 14,444 children. Of the miners killed, 55 per cent were married, and there was an average of seven orphans to each three families. When the full statistics of coal-miners killed at work during that decade in the entire United States, 19,649, are estimated upon this basis, the indication is that the dependency of over ten thousand widows and over twenty-five thousand orphans may be charged to the account of American coal production in ten years.

The annual Mine Report of the Illinois Bureau of Labor Statistics furnishes data for Table XII, showing in the case of men non-fatally injured in the coal-mines of the state, the outcome of the injury and the number of dependents affected by it. Of 5423 men so injured during the decade, 13 per cent were permanently disabled, and those recovering lost an average of fifty-three days' time. Of these 5423 men, 55 per cent were married, and there was an average of over two children to each family.

In connection with the Pittsburg "Survey" it was found that 258 out of 526 men killed in

TABLE XI

WIDOWS AND ORPHANS OF COAL-MINERS KILLED AT WORK IN ILLINOIS AND PENNSYLVANIA[1]

		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	Ten years
Pennsylvania (anthracite mines)	Men killed	461	411	513	300	518	595	644	557	708	678	5,385
	Orphans	609	525	625	377	592	753	876	728	949	818	6,852
	Widows	249	230	272	146	269	323	349	314	406	369	2,927
	Percentage men killed leaving widows	54.0	55.9	53.0	48.6	51.9	54.1	53.9	56.3	57.3	54.4	54.3
Pennsylvania (bituminous mines)	Men killed	258	265	301	456	402	536	479	477	806	572	4,552
	Orphans	470	297	412	621	484	487	543	566	852	674	5,406
	Widows	148	145	184	262	220	276	255	269	409	291	2,459
	Percentage men killed leaving widows	57.3	54.7	61.1	57.4	54.7	51.5	53.6	56.4	50.7	50.8	54.0
Illinois	Men killed	84	94	99	99	156	157	199	155	165	188	1,391
	Orphans	150	136	135	154	280	239	270	326	273	223	2,186
	Widows	46	53	55	59	93	87	114	102	95	93	797
	Percentage men killed leaving widows	54.7	56.4	55.5	59.5	59.6	55.4	57.3	65.8	57.5	50.8	57.3
Totals (Illinois and Pennsylvania)	Men killed	803	770	913	855	1,076	1,288	1,322	1,189	1,679	1,438	11,328
	Orphans	1,229	958	1,172	1,152	1,356	1,479	1,689	1,620	2,074	1,715	14,444
	Widows	443	428	511	467	582	686	718	685	910	753	6,183
	Percentage men killed leaving widows	55.1	55.5	55.9	54.6	54.0	53.2	54.3	57.6	54.2	52.5	54.5

[1] Compiled from the Annual Reports of the Pennsylvania Department of Internal Affairs, 1899 to 1902, and of the Pennsylvania Department of Mines 1903 to 1908, and from the Annual Coal Reports of the Illinois Bureau of Labor Statistics, 1899 to 1908.

TABLE XII

TIME LOST BY NON-FATAL COAL-MINE ACCIDENTS IN ILLINOIS, AND DEPENDENTS AFFECTED[1]

		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	Ten Years
Number injured		597	611	422	406	410	507	535	480	636	819	5,423
Outcome of injury	Permanent[2]	42	28	60	67	52	119	69	58	101	80	676
	Temporary[2]	555	583	362	339	358	388	466	422	535	739	4,747
	Average days' time lost by those recovered	42.0	40.4	52.8	58.9	57.9	56.2	60.7	57.0	54.7	56.1	53.0
	Total days' time lost by those recovered	23,323	23,555	19,112	19,984	20,746	21,835	28,309	24,086	29,279	41,456	251,685
Dependents affected	Number of children	782	715	541	573	499	634	749	566	823	912	6,794
	Number married	329	333	212	229	221	277	312	256	361	443	2,973
	Percentage married	55.1	54.5	50.2	56.1	53.9	54.6	58.3	53.3	56.7	54.0	54.8

[1] Compiled from the Annual Coal Reports of the Illinois Bureau of Labor Statistics.

[2] The meaning of these figures is confusing. For the years from 1899 to 1901, inclusive, they are for persons "reported as losing time," and for the remaining years, for persons "recovered and losing time."

the industries of the county in one year, left dependent widows and families. The fortunes of 132 of these fatherless families, including 470 children under sixteen, were followed for a year or more after the accident. In some cases considerable insurance was left, in others the widow remarried, and in still others there were grown sons to assume the burdens of the lost father. These were the few; the majority were left in straitened circumstances. Out of the 132 widows, 55 went to work, 13 returned, with children, to the homes of their parents, while 35 received aid from outside sources. In other cases children were taken from school and put to work.

Is it not reasonable to raise the question whether a great deal of the undesirable employment of children under legal age is not due to the economic necessity imposed by industrial accident losses? In his report for 1906, the Chief Mining Inspector of Pennsylvania says: —

> During the years 1900 to 1906 inclusive, mining casualties (in Pennsylvania) left 1611 widows, and 3410 orphans under fourteen years. . . . When a state enacts a law prohibiting the employment of children until they reach the ages of fourteen or sixteen years, it should in justice provide some way whereby the children can be taken care of until they are legally permitted to be employed. . . . I have lived a lifetime among the mine-workers, and I know whereof I speak

when I say that humanity demands that some provision be made for these widows and orphans.

The experience of relief agencies, both public and private, might be drawn upon indefinitely for evidences of the social cost of industrial accidents in lowered standards, wrecked homes, and destitution.

Table XIII has been arranged from the Report for 1908 of the Chicago Relief and Aid Society (now the United Charities of Chicago). The conditions are typical. The average age of the man injured at his work is thirty-seven; the average contribution from labor union or employer is insufficient even for medical treatment and attendance; and the average weekly income of the families considered is reduced by two thirds.

Says the President of the Board of Commissioners of Cook County (Chicago) in his annual report for 1907: —

Injuries received in industrial pursuits are adding each year scores of persons and families to the relief list of the County Agent's office. Hundreds of able-bodied men in the prime of life, are annually receiving injuries which result in the loss of life, limbs, or health, and make many of them, or their families, county charges. Most of these men have large families, and when the breadwinner is killed or incapacitated he usually leaves them without means of support.[1]

[1] First annual message of William Busse, 1907, President of the Board of Commissioners of Cook County, p. 13.

During the year 1908, an attempt was made at the county agent's office in Chicago to ascertain the exact number of relief cases caused by industrial accidents. As many as 234 cases of such dependency were found, but the rush of demands following the industrial depression of 1907 confused the investigation, and this figure is inaccurate. During the year ending November 30, 1909, there were 338 cases in which relief was made necessary by the disability or the death of "husband or bread-winner, from injury received by accident." These were not all, however, "industrial accidents," in the sense in which the term is here used.

The facts of this chapter are necessarily inconclusive, for only limited information is available that bears directly upon the social cost of injuries to workmen. Yet it is evident that the victims are usually young men, that the majority of them have families, and that the standard of living of these families is greatly lowered by losses due to the injuries. The story of industrial accidents is at best a tale of destitution, blighted hopes, and arrested development.

CHAPTER III

VOLUNTARY AGENCIES COMPENSATING INDUSTRIAL ACCIDENTS[1]

THE foregoing chapters have set forth the enormous blood-tax that is laid upon the workers of American industry, — the killing and maiming of men in the prime of life, with wives and children dependent upon them, — and the consequent discouragement of wholesome living. But our industrial society does not throw the victim of such an accident unnoticed upon the scrap-heap. There are numerous mutual organizations among workingmen, together with more comprehensive schemes conducted by employers and by private insurance companies, which suggest that the cost of industrial accidents may be met in an adequate way. Moreover, the common law of employer's liability, with many statutory changes, is in effect in every state.[2] In the succeeding chapters the operation and effectiveness of these agencies will be considered.

[1] The facts in this chapter have been drawn in large measure from *Industrial Insurance in the United States*, by Charles R. Henderson.

[2] See chapter iv.

Relief organizations have sprung from the efforts of employees themselves to express neighborly and fraternal feelings towards those in trouble. These naturally embrace all misfortunes, whether arising from industrial injury or not; the insurance against work accidents is but a part of their general purpose. The most primitive way of relieving distress is to "pass the hat" for the benefit of an unfortunate fellow employee. But the term "fellow employee" is difficult to define in a complex industrial organization, and this loose practice leaves abundant opportunity for shirking. Consequently many groups of employees have organized into local aid societies.

An analysis is given herewith of the important features of twenty-one of these organizations concerning which information has been collected and analyzed.[1]

Expenses are usually met by the employees themselves, but the employer sometimes contributes money and often aids in administration. Eighteen of these societies grant death benefits averaging $125; two, the receipts of a special assessment, and one, nothing. Eighteen of them grant weekly disability benefits averaging $5.65; one gives free medical

[1] The societies are described in chapters ii and vii of *Industrial Insurance in the United States*, by Charles R. Henderson.

care in addition, and one provides half wages. The duration of disability payments is not unlimited. Fifteen societies restrict it to periods averaging fourteen weeks, while one limits the total payment to $96, and in another the range is from $96 to $176, according to the class of the member. Many of them provide that drunkenness or immoral conduct shall forfeit participation in benefits, and either old age or bad physical condition often bars an employee from admission to membership.

Persons of the same race in a particular locality, or groups of individuals who for any other reason are bound by common interests, naturally aid one another in emergencies. This custom also has revealed the fact that a clear definition of the obligations and benefits of membership is important, and the local, and sometimes racial, fraternal society is the result.

In both of these relief agencies the methods are crude, the rates and the payments are unscientifically graded, and the benefits are sufficient only for temporary needs. The pecuniary assistance of the societies is in no sense comprehensive enough to make up for the loss of earning power. In addition to this, they are so localized in membership that a single epidemic or catastrophe might crush them; members changing employment or

moving away lose protection at a time when it is most likely to be needed; the burden of accident losses is thrown upon the workers; and, last of all, the benefit payments savor too much of charity to conserve the independence and self-respect of the beneficiaries.

The national fraternal organizations are comparable to these societies in many respects, but their main business feature is life insurance. Accident benefits are only incidental, as when contributions or benefits are turned to the aid of a particularly unfortunate member.

Trades unions do some important work in industrial accident insurance. Such insurance with generous benefits has been successfully provided for members by seven railway brotherhoods.[1] These are the Grand Brotherhood of Locomotive Engineers, the Order of Railway Conductors, the Brotherhood of Locomotive Firemen, the Brotherhood of Railroad Trainmen, the Order of Railroad Telegraphers, the International Brotherhood of Maintenance of Way Employees, and the Switchmen's Union of North America. The unions of the engineers, conductors, firemen, and trainmen insure a total of 210,000 men for an aggregate of $248,000,000, an average of $1180 per member. The rates in these bro-

[1] *Johns Hopkins Studies in Historical and Political Science*, vol. 26, Nos. 11 and 12.

therhood insurance associations, compared with those in a private industrial insurance company, are shown in Table XIV.

TABLE XIV

INDUSTRIAL INSURANCE RATES PER $1000 FOR RAILWAY EMPLOYEES

	Brotherhood rate	Insurance company rates [1]
Engineers	$17.80	$27.23
Conductors	16.	22.23
Firemen	12.	27.23
Trainmen	18.	27.23
Telegraphers	7.20	22.23
Switchmen	20.	27.23
Maintenance of way employees	12. / 18.	27.23

In addition to the railway brotherhoods, the following trades have well organized union benefit features: boot and shoe workers, bakers, carpenters, cigar-makers, glass-workers, granite-cutters, iron-moulders, leather-workers, metal-workers, machinists, painters, pattern-makers, piano and organ workers, tailors, typographers, and wood-workers.[2] In the case of none of these unions, however, is the death benefit paid in excess of five hundred dollars, and in some it is a mere funeral benefit as low as forty or fifty dollars. The average

[1] These rates are those of the Ætna Insurance Company for men insuring at thirty-five years of age.

[2] *Johns Hopkins Studies in Historical and Political Science*, vol. 26, Nos. 11 and 12.

is about one hundred dollars. Moreover, many restrictions are placed upon eligibility to membership in the insurance associations, that greatly lessen their value as agencies for the compensation of losses by industrial accidents. Professor Henderson says: —

> So far as we can draw conclusions from correspondence with the unions in affiliation with the American Federation of Labor, it must be said that they have rarely achieved important results in the field of accident insurance. [1]

A number of companies do a so-called industrial insurance business. The custom of carrying life insurance sufficient to cover funeral expenses, — in some cases upon each member of the family, — is very common among working people. This is a source of ready relief in case of death by industrial accident, but the benefits come at high cost. For a man insuring at twenty-five, the rate in the industrial department of the Prudential Insurance Company of America, a leading concern doing this class of business, is fifty cents per week upon $760. In the New York Life Insurance Company, on the other hand, $21.49 per year pays the premium on a full thousand.[2] The

[1] *Industrial Insurance in the United States*, by Charles R. Henderson, p. 88.

[2] Policy-holders' dividends usually reduce this cost by about $3.50.

premium on the industrial policy is thus 59 per cent greater than on the ordinary life insurance policy. This is readily accounted for by the higher mortality rates among working people and by the expensive custom of collecting premiums each week. Moreover, the average policy of the industrial class is only $142, while in the ordinary life insurance company it is $2468. The workingman buys his insurance, like his food and his fuel, in small quantities, and the necessity of doing so increases the expense.

The same statements are true of regular accident insurance. The rates are so high that benefits are necessarily limited. Some railroad companies, among which are the Illinois Central and the Chicago and Alton, make special arrangements whereby such insurance on the part of employees is encouraged; the latter company even pays from 30 to 50 per cent of the premiums. But the rates of the casualty companies are very high,[1] the payments are small, and, although such insurance is valuable under existing conditions, it throws most of the heavy expense of accident compensation upon the workers themselves, making adequate insurance impossible.

[1] Casualty company rates upon railroad employees run from 33 per cent to 67 per cent higher than corresponding charges under the brotherhood insurance plans.

An investigation has been made under the direction of the New York Employers' Liability Commission of all fatal industrial accidents, a total of 280, in Erie County (Buffalo) during 1908, and in the Borough of Manhattan of the city of New York during 1907 and 1908. In 137 cases out of 280, insurance in some form was carried by the deceased, — 72 insurance companies, 17 trades unions, 48 fraternal orders, and 4 relief associations figuring in the investigation. In 16 cases, or 5.7 per cent, the insurance paid was under $100; in 71 cases, or 25.4 per cent, the payment was between $100 and $500; in 21 cases, or 7.5 per cent, it was between $500 and $1000; in 25 cases, or 9 per cent, it was between $1000 and $2000; and in only 8 cases, or 2.9 per cent, was a sum paid of $2000 or over. The average amount was $667.40. This latter sum is but 82 per cent of the average yearly wages of the men killed. A further investigation was made of 1482 cases of industrial accidents in the state in 1907, including those resulting in either fatal or non-fatal injury. In 367 cases of temporary disability, insurance yielded an average of $35.56; in 20 cases of permanent disability, insurance amounted to an average of $110.85; and in 35 cases of fatal injury, insurance averaging $522.88 was collected.

As a consequence of growing public sympathy for the victims of industrial accidents, many employers have voluntarily adopted schemes for substantial compensation. A favorite way of doing this is to allow wages to continue through the period of temporary disability. Out of 348 cases of injury to workmen in the state of Michigan in 1905, upon which reports were made concerning compensation, in 172 cases the employers allowed full wages to continue during the time of unemployment, — an average of thirty-three days. The New York Edison Company pays about $10,000 a year in wages to injured employees. Although this is actuated in part by the humane motives of the employer, and is of compensatory value, it is also doubtless intended to conciliate the injured worker, and so lessen the chances of his bringing suit, and thus to buy cheaply a release from further liability.[1]

[1] In a case that came under the direct observation of the writer, the caving in of a ditch, due to the neglect of a foreman, had crushed the chest and lungs of a plumber. A member of the employing firm was admitted to the hospital to see him on the day of the accident. With sympathetic suavity the employer inquired after the patient's welfare and in particular concerning the probable duration of his disablement. The plumber repeated the indefinite guess of the surgeon that it would be "at least six weeks." Upon seeing this opening for a bargain, the good Samaritan was at once transformed into the acute business man and made the following proposition: to pay full wages together with physician's fees and hospital expenses, for six weeks, in exchange for the signature of the employee to a release of the employer from further liability.

Following one of the greatest disasters in the history of American industry — the fire on November 13, 1909, in the mine of the St. Paul Coal Company at Cherry, Illinois — the voluntary settlements have been markedly liberal. Of the 258 men who lost their lives in the mine, 84 were single, 168 married, four were widowers, one divorced, and one unknown. Those married left 382 children under sixteen years of age. To provide for the immediate relief of the widows, orphans, and other dependents, the coal company allowed wages to continue for about two weeks,[1] and provided free rent and coal throughout the winter. The Chicago, Milwaukee, and Saint Paul Railroad Company, of which the coal company is in effect a subsidiary concern, was very generous in providing transportation facilities for the local relief committee. In February the officials of the coal company offered settlement on the basis of $800 to the heirs of each unmarried victim and $1,800 to each widow. This has been accepted in the majority of cases. Attorneys' fees are ten per cent of the sums so collected.[2]

[1] As two weeks' pay was always held back, the payment of wages thus continued for four weeks following the disaster.

[2] In addition to these company aids, the United Mine Workers of America made payments of $150 each to the dependents of about 230 men within the month following the disaster, and there is now, May, 1910, over a quarter-million dollars, — $100,000 especially ap-

The extraordinary hazard of railway employment, and the severe public criticism and expensive litigation which invariably follow accidents, led to the organization, at an early date, of railway relief departments. These schemes usually provide hospital care and surgical treatment for injured men, and include insurance features promising substantial death payments and disability benefits. Liberal aids and guarantees are usually granted by the companies, although the greater portion of the expense is deducted from the pay-checks of employees. These railroad departments are generally successful in providing temporary relief, and many similar schemes have been introduced into other industrial plants.

The following statement of the main features of nineteen important relief systems operated by industrial concerns, mercantile houses, and transportation companies,[1] illustrates the work of this class of compensation agencies. In sixteen of these systems, yearly

propriated by the Illinois legislature, $70,000 contributed by the United Mine Workers of America, and $90,000 remaining of the Red Cross fund, — which will be scientifically administered for the permanent relief of dependents. It must be borne in mind, however, that the spectacular character of a catastrophe like this calls forth great public sympathy. Each of thousands of men picked off one by one each year calls forth far less than a proportionate share of public interest. It is for this reason that the industrial accident problem must be studied closely before its acuteness becomes apparent.

[1] Described by Henderson, *Industrial Insurance in the United States*, chapters ii and vii.

dues average $12.95 per member; in one system it is two per cent of wages; in another, assessments are levied only as needed; and in the remaining case the amount of the dues is not stated. Most companies pay operating expenses, some make annual contributions, often very generous, and others pay a stated percentage — in one case as high as fifty per cent — of the payments made by employees. The death benefits of thirteen of these systems average $450; in four they are not stated; in one the payment is equal to two years' wages; and in another, $50 and a small pension for two years to dependent heirs. In fifteen cases, injury benefits average eight dollars a week, in one it is half wages, in another three-fourths of a special levy, and in the remaining two it is not stated. In regard to the duration of the payment of benefits, one organization pays for as long as two years, and two make payments for one year, but the average is thirty-five weeks. In three cases the company makes membership in the relief departments a condition of employment; and the rules of the department in three companies attempt to limit the freedom of injured members receiving benefits to seek legal satisfaction from the employer. In ten cases members and company exercise joint powers of administration; in three cases there is full company control.

One of the strongest of these relief systems has been conducted for over twenty years by the Chicago, Burlington, and Quincy Railroad Company. The company pays all expenses of administration, while members of the relief department pay very moderate rates graduated according to the amount of the benefits guaranteed. Insurance against disability from either sickness or accident provides for benefits of from fifty cents to two dollars and fifty cents a day. In case of sickness, benefits are paid for a maximum period of one year at full rates, and for an additional year, if disability continues, at one half rates. In accident cases the benefits are the same, except that payments continue as long as the member is disabled. Death benefits run from $300 to $6000. The victims of accidents resulting in permanent partial disability receive either a permanent benefit or a lump payment, as may be agreed upon. Similar relief organizations exist on many large railroad systems, especially on those in the East.

During the year ending December 31, 1909, the relief system of this railroad company had enrolled 27,752 members, or 57.37 per cent of all persons employed on the road, and over 80 per cent of those permanently employed. These members paid into the treasury a total for the year of $545,595.12, an average of

$19.70. A total of $573,646.01 was paid out in benefits on 16,459 cases. Of these cases, 8063, or 48.9 per cent, were due to accidents, either on or off duty; and of the total benefits paid, $309,485.34, or 53.9 per cent, was on account of accidents. The remainder was chargeable to sickness.

As a consideration [says the superintendent of the relief system] for the amounts paid by the company for the maintenance of the relief department, the facilities furnished, the guarantee of payment of benefits, etc., the members agree that in the event of injury they will, after the injury, elect whether to accept benefits, which acceptance is to operate as a release of all claims for damages against the company on account of that particular injury, or, instead thereof, to decline benefits and look to the company for damages. They cannot do both.

It should be noted in this connection, that the actual cash contribution of the company between June 1, 1889, and December 31, 1909, was $1,330,544.13, or 17.7 per cent of the total receipts.

A more recently organized system, upon the creation of which a great amount of careful study has been expended, is the Employees' Benefit Association of the International Harvester Company and affiliated companies. The plan was instituted on September 1, 1908. It provides for payments from members of two per cent of their wages, deducted each

pay-day, and from the company of $50,000 a year. Disability from either accident or sickness entitles the injured member to one half wages for not over one year; the amount of the insurance against death from sickness is one year's wages; against death from accident, two years' wages. In case of permanent partial disability, proportionate benefits may be paid in a lump sum, and in case of chronic sickness or grave injury, similar settlements may be made by mutual agreement.[1] In marked contrast to the policy of the railroad relief department described above, the International Harvester Company makes no effort to limit the right of beneficiaries to seek legal satisfaction for injuries received. "Members who receive benefits, either disability or death benefits," says an officer of the company, "are not required to sign a release in any form, releasing the company from liability."

During the first sixteen months that the plan was in operation, — September 1, 1908, to December 31, 1909, — the average enrollment was 74.9 per cent of all men employed. On the latter date, 23,578 memberships were in force. The net contributions from members amounted to $350,397.28, — the company contribution of $50,000 being 14.3 per cent of

[1] This plan provides for a special benefit equal to one half wages for three months for women employees who become pregnant.

this amount. During the same time, $107,179.11 was paid out in 129 death benefits, — an average of $830.85, — and $120,071.21 was paid out in 7863 disability benefits, — an average of $15.27 each.[1]

A plan of relief for industrial accident victims in which the company bears the entire expense was put in effect for one year's trial on May 1, 1910, by the United States Steel Corporation. The most progressive feature of this plan is the graded scale of benefits,— the amount paid depending not only upon the number of years spent in the service of the company, but also upon the conjugal condition of the injured man and on the number of children dependent upon him.

In case of temporary disability an unmarried man receives from the company, under this plan, 35 per cent of his wages during the time of incapacity; a married man, 50 per cent; and in each case the employee receives two per cent additional for each year of service over five years. Five per cent additional is paid for each child under sixteen years of age. In temporary disablement cases, however, benefits do not begin for ten days; they may not continue for longer than one year; and,

[1] With the addition, early in 1910, of a second and supplementary relief plan as described hereafter, the Harvester Company now doubtless provides the most liberal accident relief of any large American employer.

if the beneficiary is unmarried, he is limited to $1.50 a day, and if married, to $2.00 a day. The benefits paid for permanent disability are intended to vary according to the circumstances of the individual cases. The amount is left entirely to the discretion of the administrative officers, but is expected to conform as far as possible to the following schedule:

For the loss of a hand, one year's wages.
For the loss of an arm, eighteen months' wages.
For the loss of a foot, nine months' wages.
For the loss of a leg, one year's wages.
For the loss of an eye, six months' wages.

Death benefits include funeral expenses of not more than $100 and, in the case of married men, a payment to widows and children of eighteen months' wages, increased by three per cent for each year of service in excess of five years, and by ten per cent for each child under sixteen years of age. No payments beyond funeral expenses are ordinarily made on account of the death of unmarried men, but in case dependents are left, the officers administering the plan may take wide latitude in the exercise of judgment. In addition to these benefits, the corporation continues its former policy of providing free hospital care and surgical treatment.

The Steel Corporation has tied one string to its beneficence. Its announcement says:—

> No relief will be paid to any employee or his family if suit is brought against the company. . . . All employees of the company who accept and receive any of this relief will be required to sign a release to the company.

In speaking of death benefits in particular, the statement is made that "in no case will this relief be paid until the receipt by the company of a satisfactory release properly executed." Yet this is only natural, since employees bear no part of the expense. A fair comparison cannot be made between this plan, in which the employer pays the entire cost of relief, and other systems, in which employees pay the greater part of it; and the Steel Corporation has laudably avoided the untenable position in which many employers have placed themselves by attempting to purchase legal release with funds to which the injured men themselves had previously contributed. The sufficiency of the payments may also be called in question, — especially of those made on account of fatal injuries. But the careful gradation of the benefits according to the probable needs of the victim marks the plan as one of the best compensation schemes yet adopted in the United States, while the fact that it protects nearly a quarter of a million workmen

stimulates a keen public interest in its experimental operation.

On the same day that the relief scheme of the Steel Corporation became effective, May 1, 1910, the International Harvester Company started an accident relief plan, which, though supplementing the work of the Employees' Benefit Association described above, is entirely independent of it. It is closely comparable to that of the Steel Corporation; compensation is paid regardless of the legal defenses the employer might set up, the company bears all of the expense, a release to the company in legal form is a *sine qua non* of benefit payment, and the scale of compensations is scientifically graded. Payments by the Harvester Company are, however, markedly more liberal than by the Steel Corporation. In case of death, three years' wages, but not more than $4000 nor less than $1500, is paid to the surviving widow, children, or other dependent relatives. For the loss of a hand or foot a special benefit of one and one half year's wages is paid, but not less than $500 nor more than $2,000, and for the loss of two limbs four years' wages, but not less than $2,000. For the loss of an eye, the compensation is three fourths of one year's wages, and for the loss of both eyes, four years' wages, but not less than $2,000. During the first thirty days of

disability, the benefit is one fourth wages, but this may be increased by an equal amount if the injured employee has previously contributed to a special fund for the purpose. After thirty days, the company pays, for a maximum time of two years, one half wages. These payments are limited to twenty dollars per week. After two years an annual pension is paid to men totally disabled, equal to about one fourth of wages, but not less than ten dollars per month. The operation of this plan will be watched with no less interest than that of the United States Steel Corporation, for both represent a marked recognition by capital of its responsibility for the welfare of the working class.

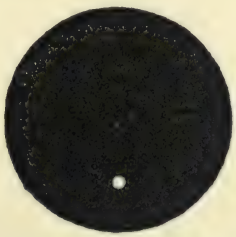
A form of relief for industrial injury which has been widely discussed in recent years, and which has promising features as a preliminary step to the development of a comprehensive policy of industrial accident compensation, is workmen's collective insurance, — an agency of special value in factories too small for the formation of strong relief departments. Policies are written by casualty companies in the name of the employer, and are blanket contracts, covering all employees or specified classes of them. The scale of prevalent compensations under such policies, as given by the "Insurance Year Book" for 1908, is as follows:

death, the loss of two limbs, or of sight, entitles the victim or his heirs to from one to one and one half years' wages; the loss of one limb, one third of one year's wages; the loss of one eye, one eighth of one year's wages; and temporary disability is compensated by the payment of half wages for a maximum period of twenty-six weeks. Free medical attendance, and insurance for the entire twenty-four hours of the day may be added to the provisions of the contract at a slightly increased cost. Premiums are based on pay-roll totals. They are sometimes paid by the employer, but the workmen themselves usually pay a part, and often the entire amount. In many cases the insurance company even allows the employer a commission for deducting the premium from pay-checks and remitting it. Rates are from one to one and one half per cent of wages for insurance providing a full year's wages in case of death or serious permanent disability, and one half wages during temporary incapacity.

In addition to the heavy cost entailed, and to the fact that it is usually thrown upon the workmen themselves, many of these policies are open to further objections. As stated in the policy form of one of these companies, the compensation for death or permanent disability is limited to $1500; for temporary dis-

ability, to $500; and the total liability of the company for a single accident cannot exceed $10,000. Many of these companies attempt further, as do the relief societies, to restrict the legal power of the injured workman to sue his employer.

In general it may be said that the relief work of employers is more comprehensive than that of workmen's coöperative agencies. But much is still lacking. Of the 526 deaths from industrial accidents in Allegheny County in one year, as found by the Pittsburg Survey, 304 were of men supporting other persons. Of these, 181 were wholly uncompensated, and the dependents of but 61 received more than $500. The disparity between the large potential loss, in wages, to the workers, and the limited compensation paid by the employ-



Loss to workmen (black circle), $123,065.
Total compensation (white circle), $520.

ers, is illustrated by the circles above, which are based upon earnings and expectation of

life in six actual cases of men permanently disabled in the industries of Pittsburg.[1]

Efforts at coöperative relief on the part of employees are numerous, and it is clear that they are fairly successful; but the benefits paid are inadequate for full compensation. Life and accident insurance are common among working people; but the cost is excessive, and the indemnities are small. The efforts of employers to provide for accident relief are more comprehensive. Voluntary payments and wages during temporary disability are often given, but the payments are usually small, and wages are unlikely to continue during permanent disability. Industrial relief departments are numerous and successful, but the cost is borne mainly by employees, and unfair conditions are often laid down. Workmen's collective insurance finds favor, but it is open to the same criticism that applies to the relief departments. It therefore seems evident that these numerous agencies, while of unquestionable value, are too spasmodic and fragmentary in their work to afford an adequate system of industrial accident compensation.

[1] Diagram from *Charities and the Commons*, March 6, 1909, p. 1174.

CHAPTER IV

EMPLOYERS' LIABILITY IN THE UNITED STATES[1]

THE liability of a person, firm, or corporation for damages arising out of a personal injury befalling an individual because of the omission of a duty or the commission of a careless act, is of long standing in the English common law. This fundamental principle, which is based only upon the fault of the employer, together with legislative enactments and judicial interpretations that supplement its application to the relations of master and servant, affords a basis upon which compensation for industrial accidents may be secured through legal action. The status of the law of employers' liability in the United States will be discussed briefly, first, in its relation to the common law, then, in regard to legislative enactments, and finally respecting the practical results of its application.

[1] No effort has been made to present an exhaustive study of the subject of this chapter. A very full statement of the common law principles and judicial interpretations, together with the text of statutory enactments in the American states, may be found in *Bulletin of the United States Bureau of Labor*, No. 74 (January, 1908).

The common-law principles here involved fall under three heads,—the law of negligence, the doctrine of assumed risks, and the fellow-servant doctrine.

It has long been recognized in the common law[1] that he whose negligence has led to the injury of a fellow man may be held financially responsible for damages. This, in brief, is the law of negligence. Linked closely to it is the principle of *respondeat superior*, which was first laid down in 1697 in the case of Tuberville *vs.* Stampe. The court asserted that he who chooses the convenience of delegating to others the performance of his personal and business services is as responsible for injuries brought about in doing them as if he were himself the direct agent. In other words, the master must answer for the negligence of the servant. Shortly after this, in the case of Thomas *vs.* Quartermaine, the principle of contributory negligence was enunciated. If the plaintiff, it was averred, had so contributed to the causes of the accident that the breach of duty on the part of the defendant was not its proximate cause, then he, the plaintiff, had no ground for action.

The law of negligence is general in its provisions,—no distinction is made, up to this

[1] The relation of the common law to employers' liability is ably discussed in *The Law of Employers' Liability*, by Augustine Birrell.

point, between those who are servants of the negligent party and those who are not. The servant is the fellow man of the master, and reasonable precaution against injury is due him. But, in the last two maxims of the common law relating to employers' liability, — the doctrine of assumed risks and the fellow-servant doctrine, — important distinctions are set up between those who are employees and those who are not, and the accountability of the master for injuries befalling his servants is limited accordingly.

The doctrine of assumed risk was the first of these maxims to be declared.[1] He who knowingly places himself in danger of personal injury by accepting hazardous employment, assumes, therewith, the risk of injury. No one is in a better position to know the dangerous character of his work, says this dogma, than the workman himself. He can therefore demand wages commensurate with the risk involved. If, for any reason, the danger in his particular position is greater than might ordinarily be expected, his legal duty is to give up his employment or to obtain a promise from the employer to make right the abnormal situation. A free citizen, says this legal theory,

[1] See "Employers' Liability," an address before the Illinois State Bar Association by Professor Floyd R. Meacham, published in the *Illinois Law Review*, vol. iv, p. 243.

may work under danger or not, just as he chooses. If he chooses to do so, then he has assumed the risk of injury.

Of these common-law principles, of which two have been discussed, the most noteworthy, curiously enough, did not appear until 1837. In that year the fellow-servant doctrine, a broad amplification of the doctrine of assumed risk, was laid down in deciding the case of Priestly *vs.* Fowler. It asserts that danger of injury through the negligence of another servant of the same master is a known, common, and ever-present risk of working in company with others, and that consequently, — in accordance with the doctrine of assumed risk, — a worker so injured has no ground for action against his employer.

These principles of the common law, together with statutory changes and judicial interpretations, form our existing law of employers' liability. The law of negligence and the doctrine of assumed risk had already been transplanted bodily from England into the United States when our law entered upon its independent development. Although the fellow-servant doctrine was not enunciated in England until long afterward, it soon found recognition in American courts, — in the case of Murray *vs.* the South Carolina Railway Company, decided in 1841 in South Carolina,

and in Farwell *vs.* the Boston and Worcester Railroad Company, decided in 1842 in Massachusetts.[1] In deciding the latter case the court said: "These are perils which the servant is as likely to know, and against which he can as effectually guard, as the master. They are perils incident to the service, and which can be as distinctly foreseen and provided for in the rate of compensation as any others."

In almost all the states and territories, modifications and extensions of these common-law doctrines have been made by legislative enactment. A general analysis of these statutory provisions will show the wide variation of the obligations imposed by employers' liability laws in different states.

Statutory changes have been made in all but six of the states and territories, but in only sixteen of these states are the enactments applicable to all servants. In twelve others the laws apply only to railroad employees; in five, to railroad and mine workers, and in one to mine workers only. In addition to these, two commonwealths have made laws applicable only to injuries befalling employees of corporations; one, laws applicable only to factory workers; three, laws applicable only

[1] Meacham, in *Illinois Law Review*, supra.

to factory and railroad employees; and another, laws applicable to all "industrial employees." In nine of the states having laws that apply to all servants, the particular hazard of employment on railroads and in mines has been recognized by the inclusion of provisions that bear specifically on cases in which men are injured in one or both of these industries.

In but nine states does legislation specifically hold all employers responsible for defects in ways, works, machinery, or plant, that may lead to the injury of employees. In five others such legislation applies to railroad companies only. Nineteen states make provisions for stated safety devices and precautions in factories, on railroads, and in mines, and stipulate that employers be held responsible for injuries arising from non-compliance.

In a majority of the states the law, in so far as it is applicable, makes the employer specifically liable for negligence in superintendence, — that is, the negligence of an employee having powers of the master delegated to him. In but four states is the fellow-servant doctrine abolished for employees in all industries. In thirteen it is abolished for railroad employees only, in three for both railroad and mining employees, and in one, for mine workers only. In ten states other than these the doctrine is greatly modified. In all, thirty-two states

have enactments of some character relating to this doctrine.

A means much used at one time to evade obligations imposed by employers' liability laws was to require workers, as a condition of employment, to sign papers releasing the employer from any claims that might be made under the provision of such laws. This is known as "contracting out." Twenty-one states expressly provide that, in so far as their liability laws apply, attempts to "contract out" shall be void. Some of the states even attach penalties to the mere act of making such an attempt. In four other states such contracts are barred between railroads and their employees, and one state makes the same prohibition in relation to the mining industry.

As is seen by the above analysis of statutory provisions, the law is far from uniform, and, as a consequence, both the liability of employers and the legal rights of injured workers vary greatly. Table XV shows the relative liability of employers in the different states as determined from the experience of the employers' liability insurance companies in the settlement of injury claims.[1] The figures, it should be observed, have only a relative significance.

[1] See hereafter, chapter v.

TABLE XV

RELATIVE COSTS DUE TO LOSSES IN DIFFERENT STATES IMPOSED BY EMPLOYERS' LIABILITY LAWS [1]

(*Used by the companies in determining rates*)

Alabama	1.20	Montana	2.00
Arizona	2.00	Nebraska	1.33
Arkansas	1.33	New Hampshire	1.00
California	1.00	New Jersey	.70
Colorado	2.00	New Mexico	2.00
Connecticut	.60	Nevada	2.00
Delaware	1.33	New York	1.00
Dist. Col.	.90	North Carolina	1.20
Florida	.60	North Dakota	2.00
Georgia	1.20	Ohio	.80
Idaho	2.00	Oklahoma	2.00
Illinois	1.33	Oregon	.80
Indiana	1.20	Pennsylvania	1.00
Indian Ter.	2.00	Rhode Island	1.33
Iowa	1.33	South Carolina	1.20
Kansas	2.00	South Dakota	2.00
Kentucky	1.33	Tennessee	2.00
Louisiana	.70	Texas	2.00
Maine	1.00	Utah	2.00
Maryland	.70	Vermont	1.00
Massachusetts	1.00	Virginia	.70
Michigan	.60	Washington	2.00
Minnesota	1.33	West Virginia	.70
Mississippi	.80	Wisconsin	1.33
Missouri	1.33	Wyoming	2.00

Although the common law affecting the liability of the employer for accidents befalling his men has, as thus shown, been greatly modified by statutory enactments in many states, the judge-made laws concerning negligence, assumed risks, and the fellow servant are still dominant. If the social and industrial con-

[1] From *Industrial Insurance in the United States*, p. 187. Inasmuch as these payments constitute costs of production, it is readily seen that, from the standpoint of industrial competition, a decided premium is placed upon delinquency in liability legislation.

ditions under which these principles were first promulgated were not greatly different from the conditions under which productive enterprises are conducted at the present time, the need for studying the problem of compensation for accidents would be less apparent. But the tremendous expansion of systems of production that has marked the development of modern industrialism has had, in so far as it relates to the subject of this essay, two important results, — increased danger to the worker, and lessened personal contact with fellow workers and with employers. Modern creative processes have brought multitudes of workers into direct contact with ponderous implements of production that render their occupations extremely dangerous, and have also made expedient, if not necessary, complicated relations between owners, managers, superintendents, foremen, and employees. In these modern industrial organizations the common worker may be far removed from fellow employees and employer, and thus his individual importance and responsibility is often reduced to a minimum.

Of this extraordinary change in a society which it is intended to serve, the law of employers' liability has failed to take cognizance. In its absurd respect for precedent, the law assumes the conditions of a bygone age. The

burden of injury, says the law of negligence, must be borne by the individual responsible for it; yet the majority of accidents to-day are chargeable to conditions, not to men. The danger of injury, says the doctrine of assumed risks, may be better known and provided against by the employee than by the employer; but, in a time of supervision by technical men and of untrained labor, the reverse is more often true. An habitually negligent man, says the fellow-servant doctrine, may be detected by his fellow workers more readily than by his employer, and, as a consequence, they are better situated to guard against his careless acts. But this too is a doctrine of the past. In an age when the negligent fellow servant may be a telegraph operator whom the railroad trainman never saw, or a hoisting engineer who speaks a different language from that of the foreign-born miner whose life depends upon his reliability, the utter absurdity of this contention is made fully evident.

More than this, there are no outgrown principles, such as the doctrine of assumed risk and the fellow-servant doctrine, that may be brought to the aid of the injured worker. The employer alone may profit from the application of archaic legal dogmas, for the common law of employers' liability was apparently developed under a philosophy of social expe-

diency that protected the man of property against the claims of the irresponsible plebeian. Whatever may have been the defense of such a policy at a time when capital was limited and the conditions of industry more simple, its projection into the life of the present is indefensible.

Even if we grant the comfortable fiction that the law arbitrates impartially in liability cases, the great difference in the ease with which employer and employee may follow its intricate processes has seriously handicapped the latter. The principal obstacles are the uncertainty, the expense, and the delay of litigation, — all of which fall most heavily upon the plaintiff. A large employer may, in the knowledge that his average of losses is low, accept serenely an adverse decision. There is no law of averages to console the injured employee or his dependents. The loss of his suit at law, like the loss of his earning power, is a blow that falls but once. The employee is usually obliged to engage his attorney upon the basis of a contingent fee, and therefore secures less expert service than does the employer in return for the sum expended. Court fees are often difficult for the plaintiff to pay, and, as each step in the long proceedings calls for additional expenditure, the temptation grows greater and greater to settle for a small

sum, or to abandon the unequal contest. The slow processes of the law work no hardship upon the defendant employer, but, for the injured worker or his dependents, it is often a starving-out process, effective in forcing an inequitable settlement. The law, in short, has so many technicalities, its defenses for the employer are so strong, and its processes are so slow, that worthy claimants with little means have but a meagre chance of just consideration.

The common law of liability, an outgrowth of the past, is no longer in harmony with the social organism it aims to serve, while statutory modifications in many states have been inadequate to remedy its deficiencies. Says Elihu Root, "The present law is foolish, wasteful, ineffective, and barbarous."[1] Its absurd protection of property rights at the expense of human interests must lead, sooner or later, to its radical modification, if not to its complete overthrow.

[1] Address before the National Civic Federation, November, 1909. Quoted in *The Survey*, vol. 23, p. 336.

CHAPTER V

EMPLOYERS' LIABILITY INSURANCE

WHILE the law of employers' liability is so framed and so interpreted that it seldom exacts adequate compensation for injured workers, yet it leaves room for such expensive litigation, and occasional heavy damages, that many employers have been constrained to seek the protection of insurance against liability costs. Of all influences affecting the operation of employers' liability laws in the United States, probably none is of greater consequence than the policies and methods of the casualty insurance companies in their conduct of the employers' liability business.

In an advertising leaflet, one of the largest casualty insurance companies doing this kind of business in the United States says:—

> A trifling injury to a workman . . . may involve the employer in a lawsuit of a very troublesome nature, or necessitate his compromising the matter at a serious cost. . . . With a view to relieving employers of such liability . . . [the insurance company] issues policies indemnifying employers against any compensation or damages which they may be required to pay as the result of legal proceedings, or which, with the concur-

rence of the [insurance] corporation, the employer may agree to pay, in respect to accident to workmen. This system of insurance must afford an inestimable relief to the heads of large factories and other employers of labor, in that they are relieved of all the trouble and anxiety attaching to accidents to their employees, and are able to determine exactly their yearly expenses in respect to such casualties.

This form of insurance against the damage claims of injured workmen is written in policies of varying forms to meet the needs of contractors, manufacturers, landlords, and the owners of teams, trucks, elevators, theatres, and vessels. The business has been developed in the United States practically within the past twenty years, and its rapid growth has been a natural outcome of the increasing stringency of liability laws and judgments based upon them, and of the tendency of injured employees, stimulated by "ambulance-chasing" attorneys, to press ruinous damage claims against employers. The policies provide that the insurance company shall, in return for a premium based upon the amount of the annual pay-roll, and varying according to the nature of the business and the condition of the plant, insure the holder against expenses arising from legal liability for injuries befalling his employees. They provide for the payment of the full cost of litigation, as well as

for the actual sums paid to injured men. The expense of immediate surgical relief is usually covered, and, for an increased premium, the full expense of medical attendance as long as needed may be included. A limit is set to the liability of the company because of any one accident, and a second, smaller sum is stated as the maximum amount payable on account of the injury of any one person. Premiums vary also according to these limits.[1] The insured is obliged to make full reports to the insurance company of all accidents, to give notice of all claims entered by injured employees, and to forward promptly every summons or other legal paper as soon as it is served.

In this way the insurance company becomes, in effect, the defendant against all damage claims. It is an attorney as well as an insurance company. Whether the case is settled by agreement or is fought through the courts, the employer is a dummy defendant. Thus employers' liability insurance shifts the source of legal compensation for injuries from the employer to the insurance corporation. It effects a distortion of natural relationships that often works a hardship to the injured workingman or his heirs, for with most em-

[1] Independently of these maximum limits, however, the insurance company pays all expenses resulting from claims, as stated above, including the cost of court proceedings.

ployers personal considerations naturally tend to loosen the purse strings. Sentiments of humanity, and a desire to placate criticism both on the part of the employees and of the public, induce generous action towards the injured workman. The liability insurance company has none of these interests; it is a "soulless corporation" in the strict meaning of the term. Its service to the world of business is to reduce liability obligations to the barest requirements of the law; the personal element is entirely removed, and the injured workman faces the calculating claim agents and the resourceful attorneys of a distant corporation of which he may never have heard before.

But the objection that the adjustment of claims is based upon wholly impersonal considerations is not of itself sufficient to condemn employers' liability insurance. This is fundamentally sound in principle, for, since the extent to which human sympathy will benefit the injured worker cannot be foretold, and the employee may not always know what his treatment is likely to be before it is too late for precaution, the removal of the personal element may be made an exceedingly desirable feature of any plan for compensating industrial injuries. The substitution of a definite and uniform obligation for the loose method of determination often followed by

employers would be expedient in any system of handling this troublesome class of industrial costs.

So far, very well. But the liability company makes only a slight contribution to such an end. It removes the personal element; but for what? The policy makes no promise of compensation for the workman; it merely promises the employer immunity from such charges. Whatever considerations of humanity or of selfish interest may have influenced the employer are replaced by the calculating motives of an insurance corporation.

During the ten-year period ending with 1908, nine of the leading liability companies, as reported to the Massachusetts Insurance Department under the act of 1905, paid $44,921,435 to the victims of 1,952,731 industrial accidents, — an average of $23 each.[1] Eight of the largest companies during the ten years ending with 1907 disposed of 1,619,609 cases at an average cost of $21.58 each. During the second half of the period, they paid

[1] The distinction should be kept in mind between "liability insurance" and "employers' liability insurance." The former includes the latter, and, in addition, several classes of public liability and professional liability insurance. In the case of much of the statistical data set forth in this chapter, no separation of figures can be made, but it is believed that the facts concerning liability insurance would hold true of employers' liability insurance if such a separation could be made.

out on 933,767 cases an average of $17.29 each.

Of these 1,619,609 victims of accidents, 33,881, or 2.1 per cent, had the hardihood to seek legal satisfaction for their injuries. Their suits were disposed of at an average cost of $489.83 each. During the second half of the decade, 14,449 cases cost an average of $420.11 each.[1] While it is impossible to determine from these figures what sum, after paying attorneys' fees and other expenses, actually reached accident victims, it is evident that the voluntary compensations paid by insurance companies are mere pittances, and that payments enforced by lawsuits average less than five hundred dollars.

It might be expected that the transfer of liability obligations from employers to large and powerful insurance corporations would tend to lessen the delay incident to the settlement of suits. But this does not prove to be the case. As reported in the "Insurance Year Book" for 1909, insurance companies doing business in the United States had 12,502 suits outstanding on December 31, 1908. Of these suits, 1927, or 15.4 per cent, were for injuries less than one year old; 4264, or 34.1 per cent,

[1] Inasmuch as these figures form a part of the total upon which averages are based in the preceding paragraph, it is evident that average compensations to the 98 per cent who did not bring suit were much smaller than there indicated.

for injuries more than one and less than two years old; 5449, or 43.5 per cent, for injuries between two and five years old; 808, or 6.4 per cent, for injuries between five and ten years old; and 54, or 0.5 per cent, were for injuries over ten years old. Although corresponding figures are not available concerning suits against employers who were not insured, the showing of the liability companies is far from favorable, and the virtue of prompt settlement of injury claims cannot be ascribed to their business.

In the wide discussion during recent years upon the need of a better system of industrial accident compensation, much has been spoken and written about the economic character of the employers' liability insurance business. "In the ten years ending with 1907," says a recent labor office report,[1] "$82,732,705 were collected as premiums by the eight largest liability companies in the United States, and $34,951,103 (or 42 per cent of the premiums) were paid out in losses to 1,619,607 injured workingmen — an average of $21.57 to each person." This conclusion is borne out by the comparisons made in Table XVI following, and wide criticism of the social economy of this means of covering accident costs has

[1] *Bulletin No. 1, Minnesota Bureau of Labor, Industries, and Commerce*, p. 47.

been based upon similar statistical data. But in order to do full justice to the liability companies, consideration must be given to the corresponding figures for other lines of insurance presented in Table XVII, on page 72.

In Table XVI is presented the liability experience of all insurance companies doing busi-

TABLE XVI

LIABILITY EXPERIENCE OF INSURANCE COMPANIES [1]

Year or years	Premiums received	Losses paid	Percentage losses paid of premiums received
1904	$14,807,515	$6,123,770	41.3
1905	16,377,613	7,202,565	44.0
1906	19,358,447	8,902,951	46.0
1907	22,759,060	10,999,586	48.3
1908	22,711,547	11,670,222	51.4
Five years ending with 1908	$96,014,182	$44,899,094	46.7
Fifteen years ending with 1908	$164,888,133	$75,172,257	45.6

ness in the United States, for the fifteen years ending with 1908. During this period the total losses paid were 45.6 per cent of the total premiums collected, and during the five-year period ending with 1908 the losses were 46.7 per cent of the premiums — the percentage being but slightly higher than for the fifteen-year period.

[1] Compiled from the *Insurance Year Book* for 1909.

Yet it must not be assumed that the business is unduly profitable. "It is claimed by friends of the companies," says Professor Henderson, "that the rate of commission alone for securing business will average between twenty-five and thirty per cent; . . . that [all] expenses average about fifty per cent of the premiums, and that the margin of profit left is about ten per cent of the receipts."[1] This conclusion approximates that drawn from the foregoing figures. Expert service is required on the part of officers, managers, and agents; office expenses are exceedingly heavy; and the companies pay enormous sums in the defense of injury suits against policy-holders. The full statistics for 1908 of twenty-seven leading casualty companies are given in the "Insurance Year Book" for 1909. These companies collected during the year $47,098,549 in premiums. Of this sum 45.7 per cent was paid for losses, 50.1 per cent for expenses, and but 4.2 per cent remained as the net underwriting profit on the business. During the same year, 173 companies doing practically all of the surety and casualty insurance business in the United States, and having a total capitalization of $64,872,268, collected premiums to the amount of $73,332,978. Of this latter sum, 41.4 per cent was paid out for

[1] *Industrial Insurance in the United States*, p. 136.

losses, and 52.4 per cent for expenses, including taxes. The stockholders' dividends, $5,274,399, were 8.1 per cent of the capital. This, it should be observed, is the experience of casualty companies. Figures for employers' liability insurance cannot be secured separately. Yet similar conditions, as may be seen by Table XVII, obtain in all classes of miscellaneous insurance written by these companies.

Table XVII shows for the five years ending with 1908 the ratio of losses paid to premiums

TABLE XVII

PREMIUMS RECEIVED AND LOSSES PAID IN THE UNITED STATES IN ALL LINES OF INSURANCE, EXCEPT LIFE INSURANCE, 1904 TO 1908 INCLUSIVE[1]

Line of insurance	Premiums received	Losses paid	Percentage losses paid of premiums received
Accident	$84,709,741	$36,109,631	42.6
Burglary and theft	9,772,863	3,345,921	34.2
Credit	9,817,504	5,157,962	52.5
Fidelity and surety	50,876,284	17,000,218	33.4
Fire and marine	1,464,619,611	871,939,911	59.5[2]
Health	16,684,961	6,643,160	39.8
Liability	96,014,182	44,899,094	46.7
Plate glass	13,394,737	5,110,378	38.2
Steam boiler	10,066,815	977,174	9.7
Sprinkler	649,695	165,305	25.4
Total	$1,756,606,393	$991,348,754	56.4[2]

[1] Compiled from the *Insurance Year Book* for 1909.

[2] The San Francisco fire of 1906 raises this percentage materially. The normal proportion would be about fifty per cent.

received in all lines of underwriting except life insurance. Of liability insurance premiums, 46.7 per cent, as has been stated, were paid out in losses during this time. In comparison with this, fire, marine, and credit insurance were the only classes in which more than one-half of premiums were paid out on policies. Only 56.4 per cent of funds paid out for all classes of insurance ever returned to policy-holders, and if allowance is made for the abnormal condition brought about in 1906 by the catastrophe in San Francisco, fire losses would be reduced to about fifty per cent of premiums, and the average percentage of payments for losses in all classes would be approximately the same.

In the light of these statistics it seems apparent that the liability business pays only a moderate underwriting profit, and that even the heavy expenses of conducting it are not disproportionate to those incurred in carrying on other lines of insurance business. Even in the case of the mutual accident associations, expenses are very high. The experience in 1908 of fifty-eight of these companies, carrying a billion and a quarter of insurance for a half-million members, is given in the "Insurance Year Book" for 1909. These associations collected $3,590,507 from members in the course of the year, and of this paid back

but 58.3 per cent on losses, while expenses were 41.1 per cent.

But still these defenses of the liability company do nothing to relieve the victims of industrial accidents. A very large proportion of this fifty per cent and more of liability premiums that is now necessary for the payment of a large number of high salaries, liberal commissions, generous attorneys' fees, and heavy office expenses, should be turned to the account of injured workmen and their dependents. All insurance, it appears, costs more than losses warrant, but liability insurance, while it suffers little from comparison, constitutes an exaggerated form of social extravagance, for it diverts large sums of money which ought to be used for the benefit of peculiarly unfortunate individuals.

Employers' liability insurance, under existing law, is a commercial necessity, for without it many employers would be dangerously insecure in the conduct of their business enterprises. Yet it is a gross transgressor of social economy. It stifles the brotherly love that naturally goes out from an employer to an injured workman, and forces the victim of the accident to seek compensation from a distant corporation of which the earnings and even the solvency depend on restricted loss

payments. The voluntary compensations paid by these insurance companies are mere pittances, and awards obtained from them at the expense of litigation are anything but liberal; the liability business, in common with other classes of insurance, entails an operating expense of over one half of the premiums.

It is doubtful if these abuses could, under any possible system of liability law, be wholly eliminated; yet revision of the law in the direction of reducing the speculative value of work injuries that arises out of the tempting, ever present possibility of a large award for damages, must react beneficially upon the social value of this form of insurance.

CHAPTER VI

CONCLUSION AND SUGGESTED REMEDIES

THE preceding chapters have set forth the losses due to industrial accidents in the United States, together with the efforts being made, both by legal and by private agencies, to effect an equitable distribution of the tremendous charge upon the working classes.

The blood tax of American production is larger than a humane public conscience may comfortably realize. On the railroads, in the coal-mines, in factories, and on construction work, life and limb is a constituent part of the cost of the economic goods produced. Human invention has progressed so far beyond human capacity for endurance, that a creature of mere flesh and blood has a small chance among the ponderous mechanical devices and dangerous situations that surround the life of the modern industrial worker.[1] Says the New York State Employers' Liability Commission:

> A study of the official accident statistics of this state (contained in the reports of the Commissioner of Labor) shows beyond peradventure that the hazardous

[1] In a large number of industrial accident cases studied under the direction of the New York Commission (page 92 of report quoted below), it was found that in 87.5 per cent, the injury was due solely to modern conditions.

employments of the state annually exact their toll of life and limb of the workers with astounding certainty — that the construction of iron and steel bridges and buildings has a definite cost in the lives of the workers, that each crane or derrick will, once in so many thousand operations, crush and mangle a worker; that there is a mathematical ratio of industrial accidents in the hazardous trades, depending upon the speed at which industry moves and upon the number of workmen, as remorseless and as certain as the death rate on which the tables for life insurance are based.[1]

In this modern method of human slaughter, America seems to lead. We produce one third more coal per mine-worker than does Europe, and, in doing so, kill and cripple three times as many men. There are other comparisons with European conditions indicating no less strongly that our industries consume more than is necessary of human life and limb, but the possibility of reducing the grewsome proportion is a subject, in the main, for technical study. Efforts to do so are being made perhaps as never before, by industrial concerns, by insurance corporations, and by governmental regulation,[2] but, apply whatever

[1] *Report to the Legislature of the State of New York by the Commission . . . to Inquire into the Question of Employers' Liability,* First Report, March, 1910, p. 5.

[2] One of the largest American manufacturing concerns, of which the identity is held in confidence, states that 43 per cent of its employees, in the year 1900, were injured at work so severely that time was lost beyond the day of the accident. This concern has since given close attention to the organization and conduct of a vigorous

safeguards we will, a certain number of accidents will be sure to happen. Many of them are chargeable to the rush and hurry incident to commercial accomplishment in a new country; and the increasing attention to safe equipment and cautious operation, that will inevitably follow more settled conditions, will partially solve the problem of accident compensation by reducing the number of casualties. But workingmen who face constant danger day after day, month after month, and year after year, are certain to grow careless of it. The same psychological weakness, if it may be so called, that makes the good soldier, also makes the good steel worker, the daring "sand-hog," and the strong-nerved engineer. More than this, there are mechanical imperfections which no care can eliminate, and natural phenomena which no wisdom can fore-

campaign for safety in its works, with the hopeful result that the proportion of its men thus injured has been reduced from 43 per cent in 1900 to 19 per cent in 1909. Another large employer, of which the experience is scarcely less significant than that of the first mentioned, has found that, of all accidents resulting in the loss of as much as twenty-five days' time, that occurred in its plant during a seven-year period, 90 per cent were due to preventable causes. This concern has since installed mechanical safety devices and inaugurated rules and precautionary methods that should, it asserts, prevent the repetition of any of these accidents.

It is asserted with apparent good reason by many students of the problem of accident prevention that over one half of all industrial accidents may be eliminated by proper attention to guards for machinery, rules for operation, and the inspection of equipment. These preventive means must be held in view as measures of the first importance.

tell, — all of which tend to make inevitable the loss of many lives by accident. It is, seemingly, a necessary cost of production.

Who bears the cost? To kill a man, to tear off an arm or a leg, or to destroy an eye is to cause, wholly apart from the humane consideration, as concrete a financial loss as to reduce a locomotive to scrap iron or a factory building to ashes. Is this loss met by the profits of production, or does it fall upon individual workers?

There are many private agencies for the distribution of accident costs, such as relief departments, wage payments during disability, mutual organizations of employees, and accident insurance, both individual and collective, but each of them is open to serious objection, and they are inadequate, even when considered collectively, to meet the demands of the situation. Employers are justly unwilling to insure their men while the additional burden of liability costs is constantly hanging over them, and workingmen either cannot or will not insure themselves. Even if the assumption that wages are commensurate with the risk involved were more than a comfortable fiction, the workers most in need of protection would be the ones least likely to insure themselves against accident.

The law of employers' liability in the

United States rests largely upon doctrines of the common law, — *respondeat superior*, contributory negligence, the doctrine of assumed risk, and the fellow-servant doctrine, — developed under an outgrown industrial organization. Its execution, moreover, is attended with great expense, harrowing uncertainty, and unreasonable delay. This uncertainty and variation in liability obligations against employers has been a leading cause in the development of the employers' liability insurance business, — a means of protection for the employer that lays a heavy charge upon the products of industry without making a commensurate contribution of actual economic value.

The charge, therefore, falls most heavily upon the injured workingmen and their families, and its crushing weight is apparent in wrecked homes, blighted hopes, and lost opportunities. The methods of production that call forth this modern form of human misery serve the interests of society in the general satisfaction of economic wants, and, since the avoidance of industrial accidents seems impossible, an equitable system is demanded whereby these losses can be distributed. The personal temperament of the workingman, as well as the conditions of his life and employment, precludes self-protection; he cannot and he will not insure himself. More than

this, accident losses cause such a burden of dependent classes and lead to such lowered economic efficiency that their compensation, if prevention is impossible, assumes prime social importance.

The situation is one demanding not only a thorough reformation in legal principle and procedure, but also insistence by the state upon the adequate insurance of individual workingmen. What particular form such measures should take is a problem too intricate for full discussion in this essay, but valuable hints may be gathered from a brief presentation of the underlying principles and salient features of the compensation laws in foreign countries.

Such laws, in varying degrees of perfection and widely different in detail, have been enacted in twenty-four foreign states, including seven British Colonies and all of the nations of Europe, except the Balkan states.[1] The British acts, while liberal in their provisions and well calculated to encourage settle-

[1] The full text of these laws comprises as pecial volume, *Laws Relating to Compensation for Industrial Accidents in Foreign Countries*, in the Twenty-fourth Annual Report of the United States Commissioner of Labor. The methods of business administration followed in the leading nations are analyzed in *Comparative Legislation Bulletin* No. 20, of the Legislative Reference Department of the Wisconsin Library Commission. See also *Workingmen's Insurance in Europe*, by Lee K. Frankel and Miles M. Dawson.

ment without suit, are strongly marked with the principles of individual responsibility so generally characteristic of Anglo-Saxon law. Those of the Continental states, while no less committed to the principle of fixed compensation, are usually filled with detailed provision, that is commonly considered paternalistic, for the social distribution of accident losses.

Since the widely criticised law of employers' liability in the United States is based upon the fundamental principles of the Anglo-Saxon common law,[1] the experience of Great Britain is of especial importance. As industrial organization became more complex and employers came to be farther and farther removed from their men, Great Britain found this judge-made law more and more unsatisfactory. The principles of contributory negligence and assumed risk became so flagrantly unjust, and the fellow-servant doctrine was carried to such unwarranted applications, that, after long and tumultuous agitation, they were all greatly modified, and the recovery of damages facilitated by the Employers' Liability Act of 1880. The English law was then comparable to that in those of the United States at the present time where the common law has been largely modified by statutory enactments.

[1] See pages 51–55.

Many men had good cases at law, but the obligations imposed upon employers were indefinite, great expense and long delay were necessary to litigation, and the risks were great, both on the part of the master and of the servant. Makeshifts grew up. It was in the decade following the passage of this act that liability insurance was first offered to employers, while workingmen, as in the United States at the present time, were dependent for protection upon coöperative agencies and private insurance companies. The needless burden of the dual system soon became apparent, attention was again directed towards corrective legislation, and, in a series of enactments dating from 1897 to 1906, the uncertain obligations of employers' liability were abandoned, and a moderately liberal scale of compensations was set up as a promise to the workingmen in a broad range of industries.[1] This compensation is paid largely without regard to individual responsibility for the accident, and is recoverable in a manner calculated to reduce expense and delay to a minimum. The scale of compensation provides, in the case of death, for a lump payment to dependents equal to three years' wages, but not more than $1459, and not less than $729. If no dependents are

[1] It is significant that the initial act of 1897 was passed by a Conservative government.

left, funeral expenses are paid up to a maximum of $48. Persons disabled, whether wholly or partially, permanently or temporarily, are granted pensions adjusted to meet the requirements of the individual case, but they may not exceed fifty per cent of the former earnings.

Plaintiffs may sue instead, if they so desire, under either the old common-law doctrines or under the Act of 1880, and failure to recover under either or both of these may be followed by a subsequent suit under the Compensation Act. It is provided in such cases, however, that the defendant's costs in the earlier suit or suits shall be deducted from the final awards. That this provision, together with the liberality of the Compensation Act, has greatly reduced the number of suits under the older law, is evidenced by the following statement of the Home Office: —

> The extent to which the remedy given by the Employers' Liability Act of 1880 is falling into disuse is very notable. Only 260 cases altogether were taken into English county courts during the year under this act; of these, 148 were withdrawn, settled out of court, etc., and of the remainder the plaintiff was successful in only 67. Only one case was taken under the act in the whole of the mining industry, and that was finally disposed of without being decided by the court; one case in the quarry industry, seven cases in the railway industry.[1]

[1] *Report of the Home Office for 1908 on Workmen's Compensation*, p. 21.

But recoveries are still attended with a great amount of litigation. Out of 3447 fatal cases occurring in 1908 in seven industries, — shipping, docks, railways, factories, construction, mines, and quarries, — 1852 cases, or 53.7 per cent, were taken into court for the settlement of claims.[1] The showing in regard to non-fatal cases is better. Out of 296,338 such cases in the same industries during the same time, only 2763, or less than one per cent, were taken into court.

Since 1884 German employers in most industries have been required to insure against injury in the course of employment, all administrative employees receiving less than $714 annually, and all workingmen.[2] In fatal cases, the law stipulates, a pension is granted the widow equal to twenty per cent of the annual earnings, and an additional pension of twenty per cent is granted for each child until it reaches fifteen years of age. A total pension equal to twenty per cent of the former earnings of the employee killed may be granted to dependent ascendants, and an equal pension to descendants formerly dependent upon the

[1] *Report of the Home Office for 1908 on Workmen's Compensation*, pp. 21, 22. The compensations paid in these cases averaged $750.

[2] The dramatic historical incidents leading up to the institution of this pioneer social reform by William I and Bismarck are outlined in the report of the New York State Employers' Liability Commission, pp. 36, 37.

deceased, but the total payments may, in no case, exceed sixty per cent of earnings. Funeral expenses are paid equal to one fifteenth of the annual earnings, but not less than $11.90. Pensions in disability cases are proportionate to the degree and duration of incapacity, but are limited to a maximum of two thirds of earnings, except that the pension may be increased up to one hundred per cent if the degree of injury is such that care and attention by others is permanently necessary to the comfort of the victim. In all cases the expense of medical and surgical treatment and hospital care is included. Employers are required by law to join mutual trade-group insurance organizations, and these concerns, subject to rigid legal stipulation, and under the close supervision of the imperial insurance office, assume all accident hazards. Rates are proportionate to the risks involved, and depend in great measure upon the safety rating of each individual plant or factory.

The principle of fixed compensation first set up in 1884 by Germany was recognized in Austria in 1887. In that year an act became effective providing, in fatal cases, widows' pensions of twenty per cent, and an additional twenty per cent for each child until it reaches fifteen years of age. Ascendants dependent for support upon the former earn-

ings of the deceased may receive pensions not exceeding, in the aggregate, twenty per cent of the former earnings of the deceased, and the total of all pensions is limited to fifty per cent. In any case, funeral expenses are payable, not exceeding $10.15. If the accident results in disability, the pension is fixed at an amount proportionate to the loss of earning power, but it may not exceed sixty per cent of the average earnings before the accident.

In place of the German system of insurance in mutual trade-group organizations, the requirements of the Austrian law are met by seven territorial insurance concerns. These organizations inspect and classify risks, fix rates, and administer the provisions of the compensation act under strict imperial control. Another important difference in administrative methods is found in the manner of providing the funds for future payments throughout the lifetime of the pensioner. In Germany such funds are collected by the trade-group organizations during the year in which the payment becomes due. Differences are partially equalized by means of a complicated scheme for a reserve fund, but the plan is far from satisfactory. In Austria, the annual pension is capitalized when granted, and the total of all payments is then forecast upon actuarial principles. This sum, with due

allowance for interest, is then regarded as the actual cost of the pension grant, and the sum is set aside to meet future demands.[1]

In France a law enacted in 1898 makes employers in the principal industries responsible for accident losses, and provides for pensions. In case of death, a pension of twenty per cent of the former earnings of the deceased is granted to the surviving consort, and the additional pension for children is from fifteen to forty per cent — depending upon the number under sixteen years of age. Dependent ascendants and descendants may be granted pensions of ten per cent each, but payments to such persons may not exceed, in all, thirty per cent of the former earnings of the deceased. Funeral expenses are allowed up to a maximum of $19.30. In non-fatal cases, when the incapacity for work is total and permanent, the pension is fixed at two thirds of the former earnings; when partial and permanent, at one half of the reduction in earning power; and when only temporary, at one half of earnings. Employers are also charged with the cost of medical and surgical attendance and hospital care. Insurance may be taken in any manner the employer sees fit, or not at all if he chooses

[1] These two methods are critically discussed by Professor W. F. Willoughby in *Workingmen's Insurance*, p. 104, and by the New York State Employers' Liability Commission on page 45 of the report cited above.

to carry the risk himself, but, while the insolvency of those responsible for pensions is not guarded against as carefully as in Germany and Austria, the need is met less perfectly by a guarantee fund. This fund is raised by a special license tax on the industries to which the compensation law applies, and is administered by the National Old Age Pension Fund.

The industrial insurance law of Italy covers a very broad range of employments. The initial act was passed in 1898. The death of a worker by accident is compensated by a payment equal to five years' earnings, apportioned among dependent descendants or ascendants, in the form of either pensions or lump payments, according to social condition, financial need, and closeness of relationship to the deceased. If disability is total and permanent, the compensation is a payment equal to six years' earnings, but not less than $579; if permanent and partial, six times the reduction in annual earnings; and if temporary, whether total or partial, one half of the loss in earnings. The employer also meets the cost of immediate medical aid. Employers are obliged to insure their men for the amount of these compensations, and are heavily penalized for failure to do so. Insurance must be in a national insurance fund, or in private societies or companies, except that individual

employers hiring over five hundred men or groups of them hiring over four thousand may be permitted to carry their own risks by depositing approved securities. Unclaimed compensations, fines, and other miscellaneous payments constitute a special fund, one of the uses of which is to guarantee compensation charges not otherwise met.

The accident compensation and industrial insurance laws of Hungary, Belgium, The Netherlands, Denmark, Norway, Sweden, Finland, Greece, and Luxembourg are also rich in the suggestion of methods which might be adapted to American conditions.[1]

It must always be borne in mind, however, that wide differences in social and economic conditions, as well as in the trend of public opinion, make it unwise to transplant any system, in its entirety, into the United States.[2] Nevertheless, the study of the situation at home and abroad suggests a programme for reform, and its ultimate accomplishment should be held constantly in view.[3]

I. *Employers should be held accountable for*

[1] See note 1, p. 81.

[2] These laws are ably discussed with reference to their adaptation to American needs in the *Report of the New York State Employers' Liability Commission*, pp. 44–49.

[3] These suggestions have been drawn in part from *Trades Unionism and Labor Problems*, by Professor John R. Commons, pp. 568 *et seq.*

the safety of surroundings and equipment. This is now recognized in Great Britain, and in most of the states of Continental Europe. In nine American states this principle is applied to all industries; in five others, to railways; and in nineteen more, responsibility is thrown upon employers who fail to comply with legal requirements concerning stated safety devices and precautions. Its general acceptance in the United States would largely abolish the doctrine of assumed risk, and greatly reduce litigation.

II. *Employers should be held accountable for the negligent acts of their employees.* This principle also is accepted in most of the countries of Europe and in three American states. In ten others it is recognized in part, and in eighteen more it applies to specified industries. Its general acceptance would abolish the fellow-servant doctrine and restore the principle of *respondeat superior* to the full range of legal application that it should properly have.

III. *The employer's defense of contributory negligence should be denied.* The workingman's environment makes constant care impossible, and this general defense against liability works grave injustice. Industry should bear its inevitable accident losses, as it bears its inevitable fire losses and maintenance charges. No part of the burden should be

thrown upon those whose earning power is sacrificed. In most European nations only such contributory negligence as is willful, unreasonable, or unlawful bars the victim from the right to compensation, and recognition of the same principle should be an early reform in American legislation.

IV. *Employers should be held accountable for unpreventable accidents.* In spite of all possible precaution, many workingmen are sure to be killed and injured. Neither employers nor employees are at fault in such cases, but since such accidents seem necessary in the creation of economic goods, the burden should be placed, through the employer, upon the ultimate consumer of the finished product. This principle is fully recognized in Europe, and is faintly suggested by a recent law in Montana.[1] Its general acceptance in the United States, together with the recognition of the first and second principles outlined, would completely abolish the doctrine of assumed risk.

V. *Employers should bear the burden of proof.* By the English Act of 1897 it is made the part of the employer to show that the law is not applicable to the case in question, and the same principle has been partially accepted on the Continent. Two American states throw

[1] See hereafter, p. 94.

the burden of proof on the employer in railroad cases. The victim of the accident is invariably the weaker party to the controversy, and the general acceptance of this principle would make workingmen more secure in the rights conferred by other reforms.

VI. *Compensations should be paid according to a definite scale fixed by law and varying according to the age and pecuniary situation of dependents.* The principle of fixed compensation was recognized by the English Act of 1897; it has spread to the British colonies, and the definite but variable scale of payments and pensions is a meritorious feature of the compensation laws of the states on the Continent. In America a few states set maximum limits to the liability of employers on account of any one casualty, but that is all. One of the most flagrant abuses under the existing system of law is the spirit of speculation that is fostered by the ever dazzling possibility of a large award. The establishment of a definitely variable scale, together with the greater certainty of award that would be lent by the other reforms outlined, would go far in reducing the volume and expense of litigation. Fewer cases would come to trial, and jury awards would be more readily accepted without appeal.

VII. *Payment should be guaranteed by ade-*

quate insurance. A great catastrophe or some other cause often leads to the insolvency of the employer at a time when the injured men and their dependents are most in need of assistance. The methods of guarantee used in Germany, Austria, France, and Italy have been described, and more or less effective plans are followed in other countries. First lien on assets and compulsory state insurance are most frequently resorted to. The statutes of Massachusetts and New York provide that any employer may partially disburden himself of liability by insuring his men in private insurance companies, but he is not obliged to do so.[1] In Montana a law passed in 1909 provides a special tax of one per cent on the earnings of coal-miners and of one cent per ton on all coal mined. The proceeds make up a state fund for the generous compensation of accidents in the coal-mining industry.[2] Efforts to compel employers to insure their men against accident would be met with active resistance in the United States, and requirements as rigid as those of Germany and Austria would be justly condemned by public opinion. But to secure its citizens in their

[1] A later law in New York requires the employers of men in a few of the hazardous trades to insure them against injury while at work.

[2] The underlying principles of this law are advanced beyond those of any similar statute in the United States, but the detail is crudely worked out.

personal rights is a proper police function of the state, and our laws should insist that employers, at their own expense, insure their men for the amount of the stipulated compensations. Such guarantee should be by insurance in private, mutual, or governmental casualty concerns, or by the deposit of approved securities.

VIII. *Compensation payments should be conserved.* Many persons left dependent are incompetent to care for large sums of money suddenly acquired. Courts of proper jurisdiction should be given authority to determine whether lump payments should be made or the sum invested in annuities. The pension systems of the Continental European states are rich in the suggestion of administrative methods for accomplishing this purpose.

The incorporation of these principles into the American law of employers' liability will be found a long and difficult process, for many obstacles exist, both in social and economic conditions,[1] and in constitutional law and judi-

[1] That the cost of adequate compensation would be found altogether too small to give cause for serious concern is strongly suggested by the following statistical comparisons.

During the decade ending with 1908, as shown by Table XII on page 24, a total of 251,685 days' time was lost on account of temporary injuries to employees in the coal mines of Illinois. During the same time, as reported by the Illinois Bureau of Labor Statistics, the

cial fancy. It is doubtful if adequate legislation can be enacted in many states without constitutional amendments, and it is not improbable that an amendment to the federal constitution will be found necessary. But the outlook is hopeful. Twelve years ago it was said of workmen's compensation, "The very principles involved are not as yet even comprehended in the United States."[1] Public interest has since been aroused by the results of wide research; close attention has been turned upon every phase of the subject, and it is one of the leading topics before the American people at the present time. Employers,

mines of the state produced 349,850,318 tons of coal, or 1,390 tons for each day's time lost on account of temporary injuries. This comparison, to be sure, takes no account of accidents that resulted in death or in permanent injury, but statistics presented by Table VII on page 12 make it clear that adequate payment for all casualty losses would be only a moderate burden upon the coal-mining industry. During the decade ending with 1908, it is there shown, 178,266 tons of coal were mined in Illinois and Pennsylvania for each employee killed, and 78,195 tons for each one injured, — a volume of production so large that a very small proportion of it would be ample for all compensation costs. Again, it is seen by reference to Table VIII on page 14 that 23,895 employees were killed and 335,964 were injured on the railways of the country during the seven years ending June 30, 1908. In comparison with this large total of casualties, the volume of railway service as reported by the Interstate Commerce Commission is so tremendous that, leaving freight service out of all account and considering only passenger service, one mill for each "passenger mile" of traffic (one passenger carried one mile), would be sufficient to pay an average compensation of three hundred dollars to each employee injured and an average of three thousand to the heirs of each one killed.

[1] Willoughby, *Workingmen's Insurance*, p. 329.

insurance men, lawyers, legislators, jurists, publicists, and leaders in social reform are focusing attention upon the question with a unanimity of interest that is almost unprecedented. It was a live issue before the last meeting of the National Civic Federation; it is constantly before associations of manufacturers and other bodies of employers, and there have been held within a year three national conferences[1] upon this question alone. During the early months of 1909, changes in the law were under consideration in at least seventeen states. Significant amendments have been passed in some, while in others, notably in New York, Wisconsin, Minnesota, and Illinois, special commissions are making, or have completed, more or less exhaustive studies. In addition to this, two of the largest American employers, the United States Steel Corporation and the International Harvester Company, have instituted accident relief plans, as described in Chapter III, that are strikingly similar to the compulsory insurance and compensation systems of Continental Europe.

The situation presents a problem in the equitable distribution of the fruits of industry. Production commands a sufficient economic

[1] Atlantic City, N.J., August, 1909; Washington, D. C., January, 1910; and Chicago, June, 1910.

return to meet all of its legitimate charges, and a reasonable portion should be turned to the account of those unfortunates whom industrial accidents leave without means of livelihood. The costs fall with crushing force upon the individual victims. If these costs were to fall upon the enormous capital and tremendous earning power of the industrial world, they would seem insignificant. Yet absurd legal precedents set up generations ago, and now dishonored at their source, are effective barriers against proper distribution. Legislation that pulls down these barriers will add much to the security, contentment, and efficiency of the workers of American industry.

INDEX

INDEX

The Riverside Press
CAMBRIDGE . MASSACHUSETTS
U . S . A